

County

Borough



of Derby.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

YEAR 1904,

BY

William J. Howarth, M.D., D.P.H., &c.,

MEDICAL OFFICER OF HEALTH, AND MEDICAL SUPERINTENDENT OF THE
BOROUGH ISOLATION HOSPITAL.

DERBY:

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Medical Officer of Health.

WILLIAM J. HOWARTH, M.D., D.P.H., &c.

PUBLIC HEALTH DEPARTMENT,

FORD STREET, DERBY,

MAY 8th, 1905.

TO THE

Chairman and Members of the Sanitary Committee.

GENTLEMEN,

I beg to present herewith a Report upon the Health and Sanitary condition of the County Borough of Derby during the year 1904, this being the 28th Annual Report of the Medical Officer of Health.

I am, Gentlemen,

Yours obediently,

WILLIAM J. HOWARTH,

MEDICAL OFFICER OF HEALTH.

By order of the Local Government Board, dated March 23rd, 1891, Article 18, Section 14, it is prescribed that the Medical Officer of Health shall “prepare an Annual Report, to be
“made to the end of December in each year, comprising a
“summary of the action taken during the year for preventing
“the spread of disease, and an account of the sanitary state of
“his district generally at the end of the year. The report
“shall also contain an account of the enquiries which he has
“made as to conditions injurious to health existing in his district, and of the proceedings in which he has taken part or
“advised under the Public Health Act, 1875, so far as such
“proceedings relate to those conditions; and also an account
“of the supervision exercised by him or on his advice, for
“sanitary purposes over places and houses that the Sanitary
“Authorities have power to regulate, with the nature and
“results of any proceedings which may have been so required
“and taken in respect of the same during the year. It shall
“also record the action taken by him or on his advice, during
“the year, in regard to offensive trades, and to factories and
“workshops. The report shall also contain tabular statements (on forms to be supplied by the Local Government Board, or to the like effect) of the sickness and mortality
“within the district, classified according to diseases, ages, and
“localities.”

STATISTICAL SUMMARY, 1904.

Population estimated to the middle of 1904	{	Males	...	58,707	{	Total	...	120,449		
		Females	...	61,742						
Marriages	...	...	...	...	...	...	...	973		
Annual rate of Persons Married per 1,000 of the population								16·17		
Births	...	...	{	Males	...	1,678	{	Total	...	3,282
				Females	...	1,604				
Annual rate of Births per 1,000 of the population								...	27·25	
Deaths	...	...	{	Males	...	944	{	Total	...	1,824
				Females	...	880				
Annual rate of Mortality per 1,000	...	...	{	Males	...	16·1	{	Total	...	15·15
				Females	...	14·3				
Excess of Registered Births over Deaths								...	...	1,458

Area.—The area of the old Borough is 3,445 acres. The acreage of the portions of Normanton, Osmaston, and Alvaston and Boulton, added to the Borough, Nov., 1901, is 1,815 acres.

Elevation.—The inhabitants of Derby reside at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 ft., and the lowest at "The Siddals," 142 ft. The elevation at the Market Place is 157 ft.

Houses.—At the Census of 1901 there were 26,625 houses, of these, 24,851 were inhabited, and of the remaining 1,774, there were, on Census night, 995 "in occupation," that is, utilised for business or other purposes but without occupants, whilst 779 were not "in occupation." In addition there were 228 houses in course of erection.

Density.—The mean density of the Borough was equal to 23 persons per acre. The density of the various Wards was as follows:—Abbey 33, Arboretum 77, Babington 67, Becket 76, Bridge 24, Castle 73, Dale 19, Derwent 6, Friar Gate 51, Kingsmead 83, Litchurch 20, Markeaton 50, Normanton 72, Osmaston 5, Peartree 19, and Rowditch 24, persons per acre.

Annual Rateable Value.—The rateable value of the Borough for 1904 was £522,564 for District Rate purposes, and £553,520 for Poor Rate purposes.

TABLE I.—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past twenty-seven years.

YEAR.	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1,000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1873	80,385	1,613	20·1	3,092	38·4	257	3·1	162	2·0	148	296	3·6
1879	80,385	1,970	24·5	3,139	39·4	380	4·7	147	1·8	132	407	5·0
1880	80,385	1,614	20·1	3,050	37·9	233	2·8	140	1·7	145	224	2·7
1881	81,470	1,529	18·9	3,156	38·8	166	2·03	131	1·6	129	287	3·5
1882	82,687	1,533	18·5	2,959	35·7	187	2·2	140	1·6	139	259	3·1
1883	83,922	1,549	18·6	3,074	36·6	144	1·7	146	1·7	146	263	3·1
1884	85,176	1,569	18·4	3,013	35·3	181	2·1	131	1·5	143	259	3·0
1885	86,449	1,591	18·4	3,055	35·3	132	1·5	128	1·3	138	310	3·5
1886	87,741	1,651	18·8	3,069	35·9	166	1·8	154	1·7	148	272	3·1
1887	89,052	1,683	18·9	2,858	32·9	223	2·5	146	1·6	138	247	2·7
1888	90,383	1,550	17·1	2,824	31·2	163	1·8	116	1·2	145	271	2·9
1889	91,733	1,582	17·2	2,906	31·6	133	1·4	99	1·7	147	281	3·0
1890	93,105	1,813	19·8	2,699	28·9	260	2·7	143	1·5	160	326	3·5
1891	94,422	1,765	18·7	2,885	30·6	126	1·4	139	1·5	139	158	1·7
1892	95,528	1,734	18·2	3,038	31·8	174	1·9	140	1·5	171	295	3·1
1893	96,648	1,740	18·1	3,123	32·4	190	2·0	132	1·4	155	281	2·9
1894	97,781	1,468	15·1	2,890	29·6	151	1·6	103	1·1	121	249	2·6
1895	98,927	1,669	16·9	2,909	29·4	178	1·8	105	1·1	138	254	2·6
1896	100,087	1,577	15·8	2,834	28·4	182	1·9	137	1·4	150	240	2·4
1897	101,262	1,656	16·4	2,803	27·7	173	1·8	99	·98	168	249	2·5
1898	102,448	1,756	17·2	2,860	28·0	235	2·3	133	1·3	169	257	2·6
1899	103,649	1,775	17·2	2,984	28·8	173	1·7	116	1·2	163	244	2·4
1900	104,684	1,854	17·7	2,900	27·7	247	2·4	113	1·1	173	271	2·6
1901	106,076	1,598	15·1	2,939	27·8	189	1·8	99	·94	155	220	2·8
1902	116,869	1,639	14·1	3,326	28·5	145	1·3	102	·87	126	164	2·3
1903	118,707	1,596	13·5	3,215	27·1	108	0·9	102	·86	128	210	1·8
1904	120,449	1,824	15·2	3,282	27·3	167	1·4	121	1·01	143	264	2·2

Vital Statistics for the Year 1904.

Estimated Population.—The estimated population of the Borough at the middle of 1904 was 120,449. This total includes the inhabitants living in the parts of the Borough added in the year 1901, and also makes allowance for the probable increase in these districts. The increase in population during the twelve months is thus estimated at 1,742, that is 284 higher than the excess of births over deaths.

Marriages.—The number of marriages which were solemnized during 1904 was 973, which represents a rate of persons married equal to 16·17 per 1,000 of the population. This is about equal to the rate recorded last year, which was lower than any recorded since 1893, the first year of which I have a record. The following table gives information relating to the marriage rate for the past 10 years:—

Year.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Number of Marriages.	849	908	953	961	961	1025	943	948	957	973
Rate.	17·2	18·2	18·9	18·8	18·6	19·6	17·8	16·3	16·1	16·17

Birth-rate.—The births registered during the year numbered 3,282, of which there were:—

	Males.	Females.	Total.	Grand Total.
Legitimate ...	1,618	1,534	3,152	3,282.
Illegitimate ..	60	70	130	

From these figures it will be seen that the illegitimate births represent nearly 4 per cent. of the present total, as compared with 3·8 per cent. in the previous year. In the following table is set out the distribution of all births, both legitimate and illegitimate:—

TABLE II.—Relating to Births, Legitimate and Illegitimate.

WARD.	BIRTHS.			Birth Rate per 1,000.	Illegitimate Births per 1,000 Births in 1904.	Total Legitimate and Illegitimate Births registered during the years 1902, 1903, and 1904.		
	Legitimate.	Illegitimate	Total.			Legitimate.	Illegitimate	Illegitimate per 1,000 Births.
Abbey ...	303	15	318	34·7	48	912	35	37
Arborotum ...	201	5	206	22·1	25	612	12	20
Babington ...	152	7	159	18·0	45	452	16	35
Becket ...	150	6	156	20·4	39	477	22	45
Bridge ...	94	3	97	18·2	31	299	17	54
Castle ...	250	14	264	32·5	53	737	31	41
Dale ...	180	9	189	37·7	48	525	17	32
Derwent ...	163	5	168	32·5	30	476	14	29
Friargate ...	210	6	216	24·2	28	691	15	22
Kingsmead ...	200	13	213	28·7	62	567	38	63
Litchurch ...	161	7	168	19·0	42	493	19	38
Markeaton ...	224	13	237	31·6	55	686	33	46
Normanton ...	272	8	280	37·0	29	781	15	20
Osmaston ...	194	9	203	35·7	45	584	20	34
Pear Tree ...	213	6	219	30·2	28	635	13	21
Rowditch ...	185	4	189	22·4	22	543	36	63
Totals ...	3152	130	3282	27·3	40	9470	353	36

The greatest proportion of illegitimate births was noted in King's Mead Ward. The numbers recorded in each separate year are too small to admit of any reliable inference being deduced from them. In order to remedy this defect, the table recording these particulars has been enlarged, and in the additional columns the aggregate totals for the year under review and of previous years have been added. For comparative purposes, as referring to the districts of a town, perhaps this method is satisfactory, and even if not quite accurate, it will provide the social reformer with material for contemplation and perhaps suggest some sphere for the exercise of his energies. For comparison with other towns, whether from the point of view of prolificness, or of public morals, the number of children born in wedlock must be compared with

the number of women at child-bearing ages, and in like manner the number of children born out of wedlock must be compared with the number of unmarried women of the same ages, and the data thus obtained will form a reliable basis for that purpose.

The birth-rate for the whole town is calculated to be 27·3 per 1,000 of the population—a rate slightly higher than that noted last year, which was the lowest on record. Attention has been directed in previous reports to the progressive decline in the birth-rate, and to the importance of this decline in various ways; in this respect it is interesting to refer to Dr. Farr's observations on the birth-rate recorded in 1851. He showed that the birth-rate of children born in wedlock during that year was 22·5 per 100 married women of the ages 15 to 55, and that the annual birth-rate of children born out of wedlock during the 13 years, 1845-57, per 100 unmarried women, who were between the same ages, was 1·64. In the registration county of Derbyshire, the corresponding figures were 22·1 and 2·1. After referring to a further sub-division of details of a similar nature to the above, he concludes, "These facts may well calm the apprehensions of those who entertain any dread of the depopulation of the kingdom; and they present in an encouraging aspect the great resources of the English population for colonization or for war."

If the figures for the whole country show any close relationship with those which are recorded in Derby at the present time, I think a less optimistic view would now be permissible, for I find that the birth-rate per 100 married women between the ages of 15 and 55 is only 16·2. There is, however, one satisfactory observation to make, and that is that the rate among children born out of wedlock is considerably less than 1 per 100 unmarried women at the same ages.

The question of the burial of still-born children has, during the year, been the subject of correspondence between the Registrar-General and the Sanitary and Cemeteries Committees. Without entering into the details of the correspondence, I may state that the proportion of still-birth burials to total burials in the Borough Cemeteries seems very high. I have no data for comparison, but when it can be shown that the percentage of such burials in the last ten years has varied between 8·3 and 13·2 per cent., I think it is a strong argument in favour of a proper system of registration of such cases by a duly authorised official. At the present time, I believe that in this town every endeavour is made to prevent any

irregularity, but it is obviously a defective system which only requires—in the absence of a certificate from a registered medical practitioner—a declaration, to be made by a midwife or by some other person qualified to give such information, that the child about to be interred was not born alive.

The actual figures are contained in the appended table, for which information I am indebted to Mr. C. E. Oliver, Clerk to the Derby Burial Board:—

Burials in the Derby Cemeteries during the past 10 years.

Year.	Ordinary Burials.	Burials of Still-born Children.	Total.	Percentage of Burials of Still-born Children to the whole.
1895	1587	210	1797	11·7
1896	1510	218	1728	12·7
1897	1581	182	1763	10·4
1898	1744	178	1922	9·3
1899	1787	193	1980	9·8
1900	1887	195	2082	9·4
1901	1627	246	1873	13·2
1902	1552	217	1769	12·3
1903	1522	184	1706	10·8
1904	1704	154	1858	8·3

As regards the various wards, the birth-rates vary within very wide limits, being as low as 18·0 in Babington Ward and 18·2 in Bridge Ward; but on the other hand 37·7 is recorded in Dale Ward, and rates of over 30 per 1,000 are shown in Abbey, Castle, Derwent, Markeaton, Normanton, Osmaston, and Pear Tree Wards. These variations in the birth-rate are not entirely due to errors resulting from the fewness of the numbers available for comparison, for there is a marked tendency for certain wards to have low birth-rates and for others to have high rates. For instance, Babington Ward had a rate of only 18·7 in 1902—it should be

remembered that is the year following the census enumeration—17·1 in 1903, and 18·0 in the year under review; and as instances of high rates Abbey, Dale, and Osmaston have each had rates of well over 30 per 1,000 during each of the last three years.

Annual Rate of Mortality.—The total number of deaths registered during the year was 1,905, as against 1,671 in 1903, and 1,698 in 1902; of these deaths 81 were of strangers, leaving a net total of 1,824 deaths occurring amongst people usually resident in the Borough, but making no allowance for Derby residents who may have died outside the town. The net death-rate, therefore, from all causes was 15·2 per 1,000, as against 13·5 per 1,000 in 1903, and 14·1 per 1,000 in 1902.

Although the death-rate is higher than in the previous two years, it cannot be regarded as unsatisfactory; it is well below the average of the past ten years.

An enquiry into the causes of the increase shows that it is mainly at the two extremes of life that it is most noticeable. The following death-rates are calculated upon the numbers estimated to be living at the various age periods:—

Estimated Population, Number of Deaths, and Death-rates at various Age Groups in the Borough of Derby, in the years 1903 and 1904.

Age Group.	1903.			1904.		
	Estimated Population.	No. of Deaths.	Death-rate per 1,000 living at each age group.	Estimated Population.	No. of Deaths.	Death-rate per 1,000 living at each age group.
Under 5	13,127	565	43·1	13,320	658	49·4
5 and under 15...	24,993	49	2·0	25,359	58	2·3
15 ,, 25...	24,237	73	3·1	24,593	62	2·6
25 ,, 65...	51,921	555	10·7	52,682	593	11·1
65 and upwards..	4,429	355	80·2	4,495	453	100·8
Totals ...	118,707	1,596	13·5	120,449	1,824	15·2

Of the total number of deaths, about two-thirds usually occur in the two extreme periods. During 1904, there was an increase in the death-rate of 15 per cent. among children under 5 years of age, and of 20 per cent. among old persons. It is obvious that this is sufficient to account for the increase. A further reference to Table IV., which is prepared in accordance with the requirements of the Local Government Board, will enable one to recognise the diseases which have mainly contributed to the increase. At ages under five, measles showed an excess of 9 deaths last year over the previous year, and diphtheria an excess of 14; this latter is a serious fact, and it is a point which receives more detailed consideration when this disease is separately dealt with. There was also an excess of 23 deaths from diarrhœa. These diseases are generally regarded as preventable diseases, and they are responsible for about one half the increased mortality at the ages one to five. In the case of diarrhœa and measles, we have been led to expect, by previous experience, wide fluctuations in the mortality; but this has not been the case in respect to diphtheria. The remaining increase is spread over the whole of the other diseases, among which pneumonia, with an increase of 13 deaths, stands out most prominently.

At ages over 65, the influence of so-called preventable diseases on the increased death-rate is practically a negligible quantity; the chief contributing cause being diseases of the respiratory system, which show an increase of 29 deaths over the previous year's total.

The conclusion which is to be drawn from the above remarks is that the increased death-rate of 1904, over that of 1903, was due partly to less favourable meteorological conditions, and partly to the increased prevalence of several of the dangerous zymotic diseases; the former operating deleteriously on both old and young alike, and the latter on children of tender ages.

Vital Statistics compared with those recorded in other Towns.—The following table gives particulars respecting all the towns in England and Wales containing populations estimated at over 100,000. Comparisons were formerly made between Derby and what were termed the 33 great towns, but the tabulation having been altered, by the addition to the list of numerous other towns, this standard of population appears to be the most useful; the towns thus included number thirty-seven by excluding the London Municipal Boroughs, London being included as a whole.

TABLE III.—Vital Statistics of Towns containing populations estimated at over 100,000 for the year 1904.

TOWNS.	Standard Death-rate.	Recorded Death-rate, 1904.	Corrected Death-rate, 1904.	Comparative Mortality Figure 1904.	Death-rate from the seven principal Zymotic Diseases.	Deaths under 1 year to 1,000 Births.	Annual Death- rate.	
							Aged 1 to 60 Years.	Aged 60 years and upwards.
Engl'nd & Wales	18.19	16.23	16.23	1,000				
Willesden ...	16.96	11.19	12.00	739	1.62	114	5.0	58.8
Walthamstow ..	17.21	12.17	12.87	793	2.87	140	5.4	63.0
Leyton ...	17.69	12.67	13.03	803	2.56	143	5.9	51.8
Southampton ...	18.30	13.74	13.66	842	1.08	115	6.4	64.9
East Ham ...	17.06	13.08	13.95	860	3.13	154	6.2	62.7
Croydon ...	17.75	13.80	14.15	872	1.42	130	6.1	65.1
Tottenham ...	16.86	13.86	14.96	922	2.14	139	6.6	66.6
Leicester ...	17.05	14.51	15.48	954	1.97	167	6.4	69.3
Bristol ...	17.73	15.62	16.03	988	1.64	134	7.8	68.3
Cardiff ...	16.73	14.83	16.13	994	1.80	146	7.7	68.0
Brighton ...	18.46	16.60	16.36	1,008	1.64	134	8.1	69.1
Derby ...	16.88	15.30	16.49	1,016	1.40	143	7.3	77.9
Halifax ...	16.79	15.45	16.74	1,031	1.50	128	8.4	73.4
Portsmouth ...	17.75	16.88	17.30	1,066	2.13	142	8.6	68.3
Norwich ...	19.05	18.23	17.41	1,073	2.91	180	8.1	70.5
London ...	17.31	16.63	17.48	1,077	2.18	146	8.7	69.6
West Ham ...	17.01	16.45	17.59	1,084	3.43	162	8.4	72.5
Plymouth ...	18.66	18.54	18.08	1,114	2.53	172	9.5	66.4
Sheffield ...	16.88	16.79	18.10	1,115	2.20	158	8.3	76.1
Nottingham ...	17.27	17.70	18.65	1,149	2.58	176	8.6	72.3
South Shields...	17.19	17.90	18.95	1,168	1.76	145	10.3	69.3
Hull ...	17.75	18.56	19.02	1,172	3.52	178	9.4	70.7
Bolton ...	16.09	16.91	19.12	1,178	2.28	168	8.9	80.9
Blackburn ...	16.09	16.93	19.14	1,179	2.36	191	8.8	76.2
Bradford ...	16.46	17.64	19.50	1,201	2.42	166	9.7	77.0
Gateshead ...	17.26	18.51	19.51	1,202	2.88	174	9.6	73.6
Leeds ...	16.68	18.02	19.66	1,211	2.56	175	9.5	78.2
Sunderland ...	17.64	19.46	20.07	1,237	2.33	164	10.2	75.4
Oldham ...	16.18	18.19	20.45	1,260	2.31	156	10.4	80.4
N'wc'tle-on-Ty.	16.87	19.36	20.83	1,287	1.79	156	11.2	79.2
Birkenhead ...	17.07	19.64	20.93	1,290	3.71	181	9.7	79.4
Preston ...	16.63	19.20	21.00	1,294	2.93	185	9.4	89.2
Rhondda ...	16.54	19.11	21.02	1,295	3.80	190	9.4	75.8
Birmingham ...	16.91	19.88	21.39	1,318	3.42	197	10.1	76.3
Salford ...	16.47	21.18	23.40	1,442	4.37	192	11.7	84.6
Manchester ...	16.29	21.27	23.76	1,464	3.09	187	11.7	90.6
Liverpool ...	17.00	22.59	24.18	1,490	4.66	196	12.5	77.8

It will be observed that the recorded death-rate attributed to Derby is 15·3. This, as in previous years, is slightly higher than my estimate; the difference being due to the more complete exclusion of deaths among strangers in institutions, which local enquiries render possible. The corrected death-rate for Derby is 16·49, as compared with 14·65 last year. It is this figure which should be used for comparison with other towns. On the basis of the corrected death-rate, Derby is twelfth in the list of towns given, and that rate is fairly satisfactory, being only a small fraction higher than the rate recorded for the country as a whole. The comparative mortality figure is 1,016. This is a most useful figure for comparative purposes. It has this significance, if among a certain population living in England and Wales, one thousand deaths had been registered in the twelve months, 1,016 deaths would have been registered among that same population if they had lived under conditions which obtain in Derby. Only one town—Southampton—had a lower mortality from the seven principal zymotic diseases than that recorded in this town; and the death-rate among infants under one year of age was not excessive as compared with other towns, although nine other towns showed a lower rate. The lowest rates were recorded in Willesden and Southampton, 114 and 115 respectively, as compared with 143 in Derby.

District Mortality Rates.—In table IV. the various mortality rates, which have been recorded in the different wards into which the town is divided, are set out; the deaths in public Institutions having been relegated to the wards to which the various persons belonged before they were removed. Judged by the death-rates, the healthiest wards were Bridge, with a rate of 9·6, Arboretum 11·2, and Babington, Becket, and Litchureh with rates of between 12 and 13 per 1,000. The unhealthiest wards were King's Mead and Castle. Last year these two wards occupied this same unenviable position; the former standing alone as the only one in the town in which a death-rate of over 20 per 1,000 was recorded, though Castle Ward had a rate closely approximating this total, viz., 19·5. During the year under review, these two wards are again the only ones with rates over 20; in the former it was 22·8, and in the latter 20·8. Although compared with other portions of the town, the death-rates in these two wards are most unsatisfactory, I think we may reasonably congratulate ourselves that

COUNTY BOROUGH OF DERBY.

Table IV.—Causes of, and Ages at, Death during 1904.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES).																TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	STRANGERS.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up-ward.	Abbey Ward.	Arboretum Ward.	Babington Ward.	Backett Ward.	Bridge Ward.	Castle Ward.	Dale Ward.	Derwent Ward.	Fringsgate Ward.	King's Mead Ward.	Litchurch Ward.	Marleston Ward.	Normanton Ward.	Osgeston Ward.	Pear Tree Ward.	Rewditch Ward.		
Small-pox	3	1				2											1	1		1				1	
Measles	15	2	12	1																					
Scarlet Fever	4		2			1		8	1		1										4		1		
Whooping-cough	28	12	16					1	1	4	2			4	2	1	2				2	2	4	3	
Diphtheria and Membranous Croup	29		16	12		1		2	2	1	3	2	1	3		3		3	1		3	2	2	3	
Croup (Ephra)	1		1								1														10
Fever (Euteric)	6		1			3			1																1
Other Continued					2										2	1				1			1		4
Epidemic Influenza	30	3	4																						
Cholera						15	8		1	5	1	1	6	2	1	2			1	7	1	2			3
Plague																									
Diarrhoea	82	61	11	2		3	5	5	2		4	1	16	5	5	6	15	2							4
Enteritis	12	8	4						1	1								1			2	1	1	2	
Erysipelas	10					10		2		1	2				2				1					1	5
Other Septic Diseases	2	1				1	3		1									1			2	1			2
Phthisis (Pulmonary Tuberculosis)						1				1								1							
Other Tubercular Diseases	121		1	2	19	96	3	12	7	12	3		11	4	5	13	12	12	2	7	5	6	10		19
Cancer, Malignant Diseases	64	23	24	6	2	9		4	7		3		5	3	3	6	5	10	3	5	5	7	6		9
Bronchitis	141	27	12	1		33	68	14	12	9	10	5	13	3	10	6	13	12	9	8	4	4			23
Pneumonia	98	17	30	5	4	30	12	9	3	7	5	5	4	1	4	9	11	6	10	5	11	3	5		11
Pleurisy	7					1		1																	20
Other Diseases of Respiratory Organs	18	3	3	2		8	2	1								1	4					1			1
Alcoholism, Cirrhosis of Liver	22					20	1	2		2	1	2				4	4			1			1	2	3
Veneral Diseases	7	7						1	2			1			2	1	1	2		5		3	2		2
Premature Birth	89	89						4	3	5	1	7	1	15	2	6	5	8		1	1				
Diseases and Accidents of Parturition	12					3	9				1	1	1	1	2	1	1			2	1	1			2
Heart Diseases	178	5	3	7	9	105	49	11	9	14	12	4	5	9	9	7	12	21	14	24	7	6	7	11	21
Accidents	43	12	6	5	5	19	6	6	4	4	1	2	7	5	5	1	2	5	1	4	3	2	1		26
Suicides	6					5	1			1				1					2	1				1	4
All other Causes	696	196	45	15	15	158	267	57	42	35	31	23	70	36	33	43	60	43	55	39	32	41	56		172
All Causes	1824	467	191	58	62	593	453	147	104	109	97	51	169	85	94	121	169	113	136	104	88	102	135		346
Non-Residents	81		7	8	7	45	14																		

TABLE V.—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1904.

Wards.	Population in 1901.	Estimated population at middle of 1904.	Acreage.	Density in persons per acre.	Total Deaths.	Death-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis	Phthisis' death rate.	Number of deaths of infants under 1 year.	Deaths of infants under 1 year of age per 1,000 births.
Abbey	8,747	9,175	285	33	147	16.1	16	1.8	25	2.8	12	1.4	34	107
Arboretum	8,889	9,324	122	77	104	11.2	7	0.8	15	1.7	7	0.8	22	107
Babington	8,447	8,861	134	67	109	12.4	6	0.7	18	2.1	12	1.4	19	120
Becket	7,297	7,655	102	76	97	12.7	11	1.5	16	2.1	3	0.4	22	141
Bridge	5,081	5,329	229	24	51	9.6	3	0.6	12	2.3	0	—	6	62
Castle	7,786	8,132	112	73	169	20.8	21	2.6	17	2.1	11	1.4	56	213
Dale	4,785	5,019	269	19	85	17.0	10	2.0	4	0.8	4	0.8	21	112
Derwent	4,933	5,176	907	6	94	18.2	8	1.6	14	2.8	5	1.0	26	155
Friargate	8,516	8,933	176	51	121	13.6	12	1.4	20	2.3	13	1.5	32	148
King's Mead	7,064	7,426	90	83	169	22.8	16	2.2	32	4.4	12	1.7	43	202
Litchurch	8,474	8,886	462	20	113	12.8	6	0.7	18	2.1	12	1.4	23	137
Markeaton	7,200	7,552	151	50	136	18.1	6	0.8	19	2.6	2	0.3	39	165
Normanton	7,225	7,578	106	72	104	13.8	4	0.6	11	1.5	7	1.0	30	108
Osmaston	5,429	5,695	1,381	5	88	15.5	11	2.0	13	2.3	5	0.9	27	133
Pear Tree	6,930	7,270	392	19	102	14.1	16	2.3	11	1.6	6	0.9	33	151
Rowditch	8,045	8,438	354	24	135	16.0	14	1.7	19	2.3	10	1.2	34	180
*Institutions	...	...	...	...	346	...	19	...	35	...	19	...	...	...
Non-Residents	...	...	...	...	81	...	2	...	6	...	3	...	...	...
†Totals	114,848	120,449	5,272	23	1,824	15.2	167	1.4	264	2.2	121	1.01	467	143

*The deaths in Institutions have been relegated to the various Wards.

†Excluding Non-Residents.

our most unhealthy districts are no worse. In the remaining wards, the following have rates rather above the average:—Derwent 18·2, Markeaton 18·14, and Dale 17.

The zymotic death-rate for the whole town was 1·4; but rates of over 2·2 per 1,000 were recorded in Castle, Dale, King's Mead, Osmaston, and Pear Tree; whilst in Bridge, Normanton, Babington, and Arboretum Wards, the rate was under one. The highest death-rates from phthisis, and from diseases of the respiratory system, were, as in previous years, observed in King's Mead Ward. In this ward also the infantile mortality is excessive, being over 200 per 1,000 births. In Castle Ward a similar high mortality existed. Compared with last year, the infantile mortality in several of the wards is notably increased; thus, in Osmaston the rate has increased from 47 to 133. It could hardly be expected that such a low rate as 47 could be maintained, still the increase is very considerable. In Rowditch, the increase is from 110 to 180, and in Pear Tree from 107 to 151. On the other hand, there are several wards in which the tendency has been in the opposite and more desirable direction. No general deductions can be drawn from these variations, as the infantile mortality rate bears an almost constant relationship to the epidemic prevalence of diarrhœa, and one or two other zymotic diseases, such as measles and whooping cough, all three of which are, as I have previously stated, subject to extreme fluctuations.

Inquests.—I am informed by the Borough Coroner that the number of inquests held by him during the year ending Dec. 31st, 1904, was 173, being made up by 96 held on males, and 77 on females. There were no unregistered deaths in the Borough. The cause of every death was certified by a medical practitioner or by the Coroner.

Mortuary.—The Coroner's Officer, Mr. John Dexter, informs me that the number of dead bodies which were received in the mortuary during 1904 was 13, and also that no post-mortem examinations were conducted in that building. He states that several repairs require attention, as well as the renewal of the paint on both internal and external woodwork.

Comparative Statement of the Causes of Death.—In the subjoined table are set forth the various diseases which have shown an increased or a decreased mortality on the previous year; those not referred to closely approximate the previous year's total. Fuller particulars are given in Table IV.

INCREASE.	DECREASE.
Smallpox.	Scarlet Fever.
Measles.	Whooping Cough.
Diphtheria.	Enteric Fever.
Influenza.	Enteritis.
Diarrhœa.	Erysipelas.
Puerperal Fever.	Alcoholism & Cirrhosis
Phthisis.	of the Liver.
Cancer.	
Brouchitis.	
Pneumonia.	
Other Diseases of the	
Respiratory System.	
Venereal Diseases.	
Prematurity.	
Diseases of Parturition.	

The Notification of Infectious Disease.—The total number of cases of infectious diseases notified in accordance with the requirements of the Infectious Diseases Notification Act of 1890, was 1,216, as compared with 529 in the previous year, and 589 in 1902.

The highest and lowest weekly incidences were as follows:—

Week ending	1904.	Cases notified.
22nd October ...	highest number	... 73
18th June ...	lowest number	... 6

In addition to the compulsorily notifiable diseases, notifications of phthisis were received under a scheme of voluntary notification, which came into operation in 1902, 112 cases of this disease being thus brought to my notice. The total number of notified cases is higher than in any year since the Act has been in operation in Derby, the nearest approaches being over nine hundred in 1882, 1888, and 1889. Full particulars for each year are given in table V. The large total during the year under review was materially contributed to by a serious epidemic of Smallpox, and an outbreak of mild Scarlet Fever, which latter disease spread with considerable rapidity through the Firs Estate end of the town. As will be seen from the subjoined quarterly distribution, these cases were most numerous in the fourth quarter; Smallpox was most prevalent in the second quarter, and Enteric Fever and Erysipelas in the fourth quarter:—

Cases of Infectious Disease notified during 1904.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria.	Continued Fever.	Enteric Fever.	Erysipelas.	Puerperal Fever.
First ...	167	41	55	21	...	7	36	7
Second	224	117	34	25	...	12	23	3
Third ...	229	35	115	42	1	11	23	2
Fourth...	606	17	434	62	...	33	56	4
Year ...	1226	210	638	150	1	63	138	16

TABLE VI.—Number of cases of Infectious Disease notified in the Borough of Derby for 1904,
and for each year since 1881.

DISEASES.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
Small Pox ...	46	15	2	7	...	...	...	20	...	5	...	11	52	3	94	1	1	...	...	1	1	8	48	210
Scarlet Fever	423	770	506	389	232	167	64	756	775	346	318	470	501	513	364	427	432	481	885	602	616	332	185	638
Diphtheria ...	6	10	8	...	1	6	27	23	46	81	66	67	50	46	43	45	57	74	60	52	74	63	83	150
Enteric & Con. Fever ...	95	113	51	344	57	162	105	163	99	64	66	55	111	104	99	104	125	159	141	125	114	85	64	64
Typhus Fever	1	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera ...	...	...	...	...	..	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	6	6	7	11	2	1	1	3	5	1	8	9	11	7	10	3	3	6	8	7	10	13	14	16
Erysipelas ...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	67	52	88	135	138
Phthisis* ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	57	119	112
Totals ...	577	914	574	751	292	336	197	965	925	497	458	612	727	673	610	580	618	720	1094	854	867	646	648	1328

In addition to the above, the following cases of Measles were also notified during short periods of voluntary notification :—1884, 513 cases; 1887, 874 cases; 1888, 33 cases; also 34 cases of Scarlet Fever, and 3 cases of Enteric Fever from the annexed areas during 1901.

* Phthisis became a notifiable (voluntary) disease in July, 1902.

Preventive measures adopted against the spread of Infectious Diseases.—The following is a summary of the work done in this direction :—

					Quarters.				
					First.	Second.	Third.	Fourth.	Totals.
Cases isolated :—									
Smallpox in the Borough Sanatorium					41	109	35	17	202
Scarlet Fever	„	„			5	...	26	46	77
Enteric Fever in the Royal Infirmary					3	7	10	23	43
Diphtheria	„	„			8	11	12	23	54
Puerperal Fever	„	„			2	..	..	2	4
Erysipelas	„	„			3	...	1	1	5
Totals	...	...	...	...	62	127	84	112	385

Cases desiring removal, but for which no accommodation could be found :

Scarlet Fever	...	...	...	27	3	34	141	205
Diphtheria	...	...	...	2	1	3	...	6
Enteric Fever	...	...	...	...	...	...	1	1
Totals	...	...	...	29	4	37	142	212

Cases in which removal was delayed owing to want of accommodation :—

Scarlet Fever	...	...	...	...	...	18	33	51
Diphtheria	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	...	1	1
Totals	...	...	...	...	...	18	34	52

Inspectors' visits to Cases of Infectious

Disease numbered	949	1473	1037	1630	5089
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Hospital for Infectious Diseases.—During the early part of the year the outbreak of Smallpox, which commenced in February, and lasted throughout the year, became sufficiently serious, as in 1903, to necessitate the removal of all cases of Scarlet Fever from the Hospital, as all available accommodation was required to deal with it.

I drew attention, in my last report, to the difficulties which are created by this method of procedure, and I desire to again direct your attention to the necessity which exists for a separate hospital in which to treat cases of Smallpox. In doing so, I quote from my previous report, and have to state that the difficulties which were observed in 1903 were considerably increased last year owing to the length of time that the Hospital was not available for any other disease than Smallpox:—

“It is my practice to reserve one half of the observation block for the reception of such isolated cases of Smallpox as may be notified. I have found it possible by using the whole of the observation ward to accommodate about seven persons, viz., four of one sex and three of another, without interfering with the cases of Scarlet Fever, but this method of dealing with the disease involves some little anxiety, inasmuch as the laundry and administrative block are common to the whole institution. Although for several years I have succeeded in thus isolating cases of Smallpox without any untoward results as regards Scarlet Fever patients in the other blocks, it necessitates careful and constant supervision, for any negligence in observing the strict regulations which I have laid down might be followed by distinctly disagreeable results. When it appears probable, as in 1903, that an outbreak of the disease will not be limited to the first two or three cases notified, it then becomes necessary to prepare one of the wards usually used for Scarlet Fever patients for the reception of Smallpox cases, and to enable this to be done, patients in the convalescent stage are returned home. They are passed through the discharge block and their clothing carefully disinfected. As a rule no extension of the disease follows this step, nevertheless, the whole procedure is highly undesirable, not only from the point of view of the administrative difficulties which result from the treatment of two infectious diseases on the same site, but also from the fact that during the periods that the Hospital is entirely used for Smallpox it not unfrequently happens that cases of Scarlet Fever are notified in respect to which there are urgent circumstances which make it extremely desirable that the case should be removed from the house and isolated as soon as possible, an instance of such being, a woman expecting her confinement during the time the case of Scarlet Fever will be under treatment at home. The risks to which the woman is exposed under such circumstances are generally admitted as being considerable and serious.” I

have again to express my appreciation to Sister Moulds, and the whole of the resident staff for their assistance and co-operation, which have materially helped in promoting the efficiency of the Hospital; and at the same time, I shall perhaps be pardoned if I direct attention to the fact that out of 202 patients treated for Smallpox, only one died, a child aged 4 months. If the cases for the year 1898 are included, 60 cases, with one death—an elderly patient suffering from hemiplegia—would be added, making a total of 262 cases of Smallpox, with two deaths. Although the type of disease was, on the whole, very mild for Smallpox, cases which gave rise to considerable anxiety were not infrequent, and had it not been for the untiring devotion of the nurse in charge, and her subordinates, to such cases, these favourable results would not now have been recorded.

The following table shows the number of cases of Scarlet Fever and Smallpox which have been isolated in the Borough Hospital since it was opened in 1890 :—

Year.	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
Scarlet Fever	80	111	168	58	200	167	306	338	324	497	446	438	217	62	77
Small-Pox ...	5	...	10	52	3	94	2	1	...	...	1	1	8	47	202
Total ...	85	111	178	110	203	261	308	339	324	497	447	439	225	109	279

The average length of stay in Hospital was 45 days for Scarlet Fever, as compared with 46, 46, and 47 days in the three previous years. The longest time any patient remained under treatment was 71 days. The average duration of treatment of Smallpox cases was 31 days.

The cost of provisioning the Hospital, and other details respecting the same, are contained in the subjoined table :—

COUNTY BOROUGH OF DERBY.

TABLE VII.—Cases of Infectious Disease Notified during the Year 1904.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT							TOTAL CASES NOTIFIED IN EACH LOCALITY.													NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.																						
	At all Ages.	At Ages—Years.						Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent. (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Strangers.*	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent (H)	Friargate.	King's Mead.	Litchurch.	Markeaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Strangers.*	Total.	
		Under 1.	to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.																																				
Small-pox	210	5	16	46	34	107	2	32	4	5	4	9	52	6	15	12	25	15	9	8	...	2	8	4	30	4	5	4	9	50	6	15	12	24	15	9	6	...	2	7	4	202	
Cholera	
Diphtheria	150	1	41	75	14	19	...	13	10	12	14	7	2	7	2	13	6	10	6	7	21	6	10	4	4	2	6	6	...	1	2	1	5	4	3	2	1	3	2	4	4	54	
Membranous Croup	
Erysipelas	138	2	4	6	16	99	11	6	15	14	6	3	9	3	5	15	6	13	3	6	4	15	13	2	1	1	2	1	5	
Scarlet Fever	638	3	104	422	84	25	...	88	45	47	30	22	24	23	26	92	30	36	30	21	25	38	58	3	5	2	6	3	3	5	7	5	16	1	4	4	3	2	...	9	1	...	77
Typhus Fever	
Enteric Fever	63	...	6	16	19	22	...	1	5	5	1	1	3	...	9	6	5	...	10	2	2	4	...	9	...	1	5	1	1	1	...	4	3	3	...	10	1	2	2	...	9	...	43
Relapsing Fever	
Continued Fever	1	1	1	
Puerperal Fever	16	1	15	...	1	...	1	2	...	1	...	2	2	...	1	1	2	1	...	2	1	
Plague
Phthisis	112	12	30	66	4	9	4	3	6	1	10	3	4	12	9	13	3	8	5	8	5	9
(Voluntary Notification)
Totals	1328	11	171	577	198	354	17	150	83	87	63	43	101	42	63	152	81	89	62	54	58	73	96	31	40	9	22	15	13	57	16	26	37	34	24	25	14	8	6	21	18	395	

(I) Royal Infirmary for treatment of Enteric Fever and Diphtheria cases.

(H) Derby Borough Isolation Hospital for treatment of cases of Scarlet Fever and Small-pox.

(W) The locality in which a Workhouse is situated.

Non-Residents are noted in columns marked *.

Hospital Provisioning 1904.

1904.	Days of treatment.	Average Patients per day.	Cost of Provisioning.			Average Cost per Patient per day.*	
			£	s.	d.	s.	d.
1st Quarter	1612	17·71	119	5	4½	1	5·75
2nd „	3258	35·8	190	0	4	1	1·99
3rd „	1667	18·11	123	18	0½	1	5·8
4th „	2460	26·73	151	13	11	1	2·79
Totals 1904	8997	24·58	584	17	8	1	3·6
Totals for pre- vious year	4471	12·24	375	6	2½	1	8·14

*This includes cost of provisioning staff, but does not include working days of staff.

Mortality from Zymotic Diseases:—

Zymotic Mortality during the past five years.

Years.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000	1·8	2·4	1·8	1·2	0·9	1·4	1·94	2·49

The total deaths registered as occurring within the Borough were 170, of which number two were of strangers. The 168 deaths are equivalent to a rate of 1·4 per 1,000. Compared with previous years, this is fairly satisfactory. It is well below the ten years' average, but is in excess of the rates recorded in 1902 and 1903, which, by the way, were the lowest recorded in the Borough from this class of disease. The comparison with England and Wales, and the 76 great towns, particularly the latter, is well in favour of Derby. The diseases which are included under this heading are Smallpox, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Enteric Fever, and Diarrhœa. Each of these disease will receive separate consideration; and table VII. contains numerous details which are self-explanatory, referring to the Ward distribution of all the notifiable diseases, as well as details referring to the hospital isolation of these cases.

Smallpox :—

Mortality from Small Pox during the past five years.

Years.	Ten Years' Average	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·01	nil	nil	nil	0·02	0·03	0·01	0·01

During the year 1904, 210 persons were notified as suffering from Smallpox. Of these, 203 were admitted into the Borough Hospital for treatment, whilst of the remaining 7, 2 persons died before removal could be effected, and 5 were so far convalescent from the disease as to require detention for a period no longer than was necessary to bath and disinfect. Of the 203 hospital cases, one was a case of Chicken-pox, in which the diagnosis was doubtful, and which was isolated for a few days, as a precautionary measure. Four persons were strangers to the Borough, and were removed at the request of neighbouring authorities, thus leaving 198 Borough cases treated at the Hospital. In addition to the above total, 11 cases were discovered of persons who were undoubtedly convalescent from recent Smallpox. These patients had not been under medical treatment, and were discovered by the staff in making their enquiries into the different cases. As in the case of the other convalescents, the only detention necessary was for bathing and disinfection. The net total of the Borough cases amounts therefore to 216—viz., 198 treated in Hospital, 2 fatal cases, and 16 convalescents.

Importations of Smallpox during 1904.

The following series of cases represent the distinct importations of the disease, so far as can be ascertained. Some of these materially added to the total number of known cases, whilst others were limited practically to the introducing case :—

1. Cases 23 and 24 occurred simultaneously at one of the Common Lodging-houses. They were probably infected by a casual lodger. Only one other case was associated with this outbreak. Prior to the notification of these cases, there had been no known Smallpox in the Borough for several months.

2. Case 57 was infected at Bolsover. He showed symptoms of the disease whilst serving a term of imprisonment in Derby gaol. A large number of cases ultimately resulted from this introduction. They are fully set out in Diagram No. 2.

3. Case 71 was infected at Burton. No further case resulted.
4. Case 81 and a large number of subsequent cases were shown to have been infected by a casual who visited the "Sir Charles Napier" Inn on two consecutive afternoons, and lodged at the Nun Street Model Lodging-house for one night. Diagram No. 1 illustrates the series of cases from this source.
5. Case 103 was infected in Leicester, and was discovered suffering from the disease at the Wright Street Lodging-house. There was no extension.
6. Case 180 was infected at Matlock, and was discovered in furnished rooms in Brook Street. There was no extension.
7. Cases 187, 188, and 189 were the caretaker and two lodgers at the Church Army Labour Home. They were all in the same stage of development, and it is extremely likely that they were infected at the Home. One can hardly suggest any other opportunity of contact common to the three.
8. Cases 218 and 219 were infected by the husband of case 219. He had passed through a mild attack of the disease whilst working out of Derby. He returned not completely convalescent, and so infected wife and child.
9. Cases 314 to 319 had their origin in a similar manner. The husband of Case 314 contracted Smallpox whilst working out of Derby, and returned partially convalescent to the family, six members of which subsequently suffered from the disease.
10. Case 326 occurred in a house let in lodgings, and was probably infected by another resident in the house, who apparently had suffered from an attack of modified Smallpox. There was no extension.
11. Case 354 was infected by his brother, who was attacked with the disease in a neighbouring village. There was no extension.
12. Case 365 was infected at Leek, in Staffordshire, and came to Derby incubating the disease.
13. Case 294 lived at a Common Lodging-house, and I was subsequently informed that a man who had stayed at this house had been isolated in Birmingham suffering from Smallpox. It is probable that this man infected case 294.

In addition to the above series of cases, there was a very considerable number of other cases arising at the time when the

epidemic was at its height, which could not be associated with any known case. The probability is that many of these cases had been in contact with Smallpox at some stage or other, probably early, although such could not be traced. These are, of course, not regarded as distinct importations, but in addition to the preceding thirteen outbreaks, there seems some probability that the following, although it was impossible to make absolutely certain of the fact, were also separate importations.

Case 93 was probably infected by an unrecognised case in the same house in which he lived. It hardly seemed possible for the original place of infection to have been Derby.

Cases 341 and 348 were infected in a Common Lodging-house in the town. There was no ascertainable contact. The circumstances seemed to suggest contact with an unknown lodger.

Cases 445, 449, 450, 452, and others, lived in different parts of the town. They probably received their infection from a common source. They were all engaged in business, or had business in a limited area of the town in close proximity to the tram route, which was then in course of construction, and there seemed some possibility of their having been in contact with some unknown individual who might have had Smallpox on him.

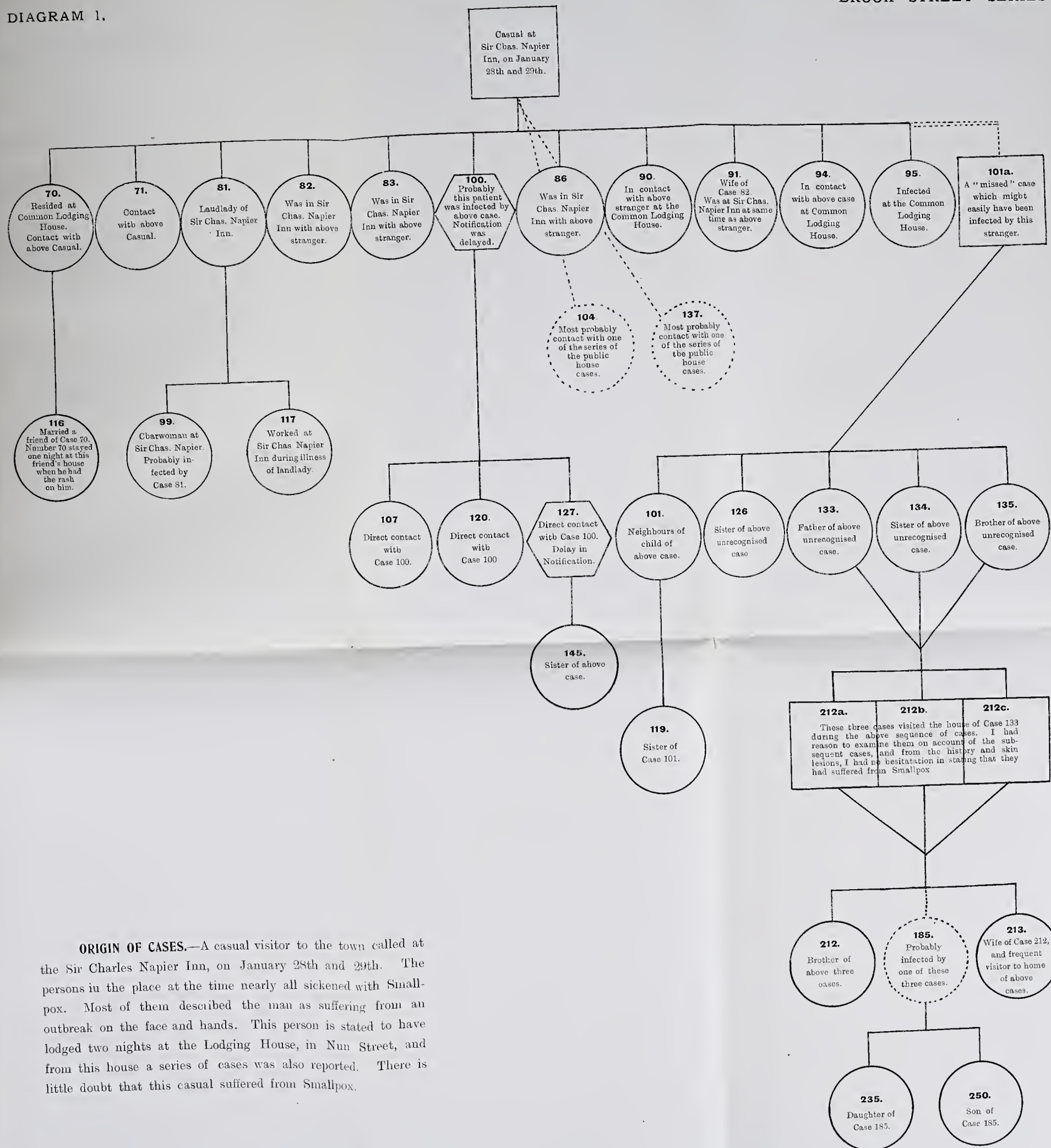
Course of the Epidemic.—The first cases were notified during the week ended January 16th. No further cases were heard of until the first week in February, after which the cases increased fairly rapidly, and between February 20th and August 27th, there were only two weeks in which cases were not notified, viz., March 26th and July 30th. The weekly number of cases reported from February 20th to the end of the year was as follows:—12, 7, 6, 6, 5, 0, 6, 17, 22, 9, 5, 10, 10, 4, 7, 9, 12, 3, 3, 2, 2, 5, 1, 0, 2, 4, 3, 13, 0, 3, 2, 0, 0, 4, 0, 1, 2, 1, 0, 0, 0, 0, 0, 4, 2, 2. The cases reported in the last week of the year proved to be the last of the series.

It is somewhat difficult to describe outbreaks of Smallpox in chronological order, and at the same time render them readily intelligible. I have, therefore, described four of the main outbreaks by means of diagrams. The others are only of interest inasmuch as they consist of a certain number of cases with features more or less in common with those set out on the diagrams. Four methods of distinguishing the cases are adopted: (1) squares represent cases, either convalescent or practically so when

SMALL POX, 1904.

BROOK STREET SERIES.

DIAGRAM 1.

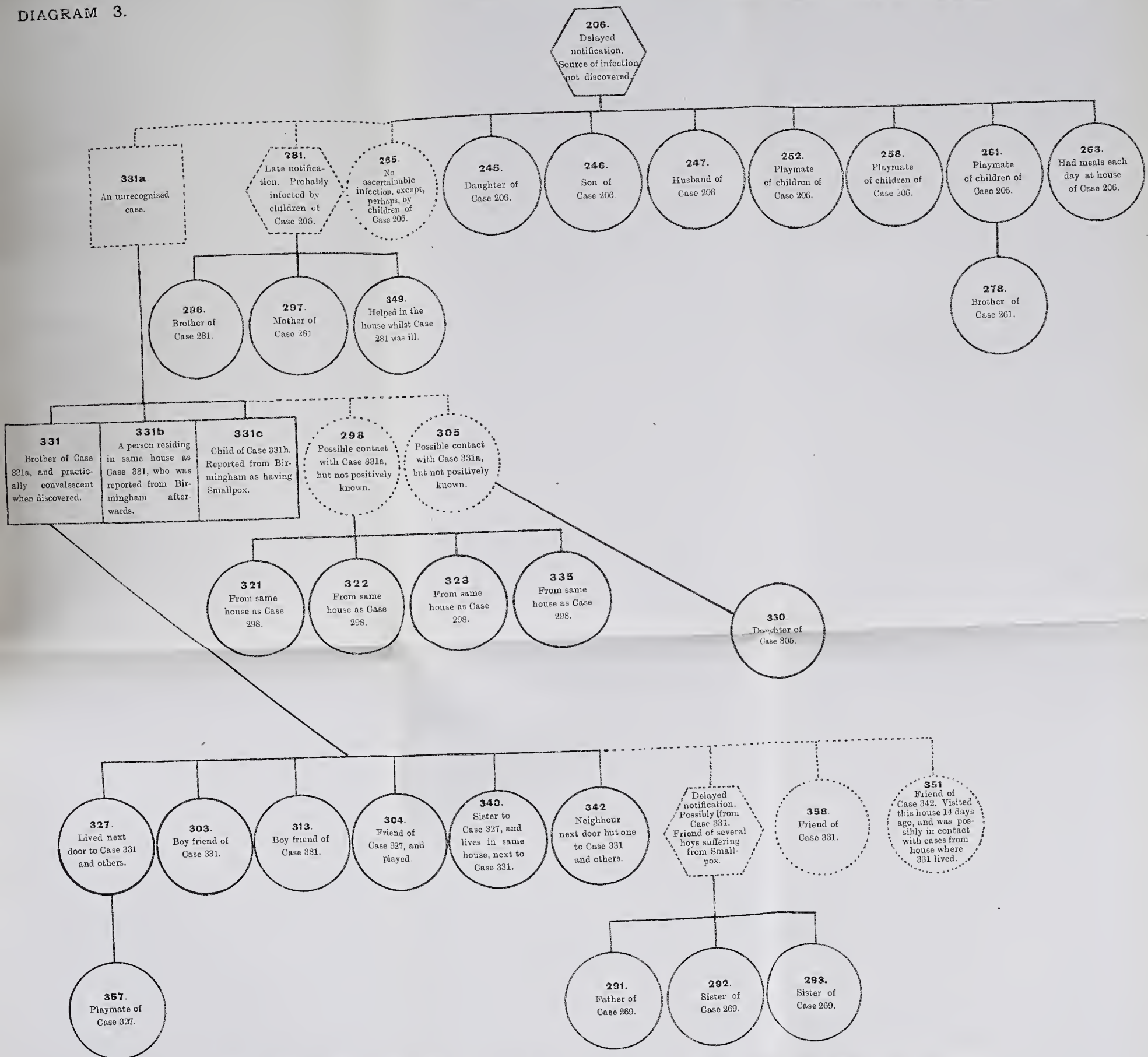


ORIGIN OF CASES.—A casual visitor to the town called at the Sir Charles Napier Inn, on January 28th and 29th. The persons in the place at the time nearly all sickened with Smallpox. Most of them described the man as suffering from an outbreak on the face and hands. This person is stated to have lodged two nights at the Lodging House, in Nun Street, and from this house a series of cases was also reported. There is little doubt that this casual suffered from Smallpox.

SMALLPOX, 1904.

Rivett Street Outbreak and Cases associated with it.

DIAGRAM 3.



The following cases were also notified from this district during the time the cases set out in the diagram were being notified, sufficient evidence of contact with the charted cases was not forthcoming to justify their inclusion in this diagram :—

Case 363, which also gave rise to Cases 387 and 401.

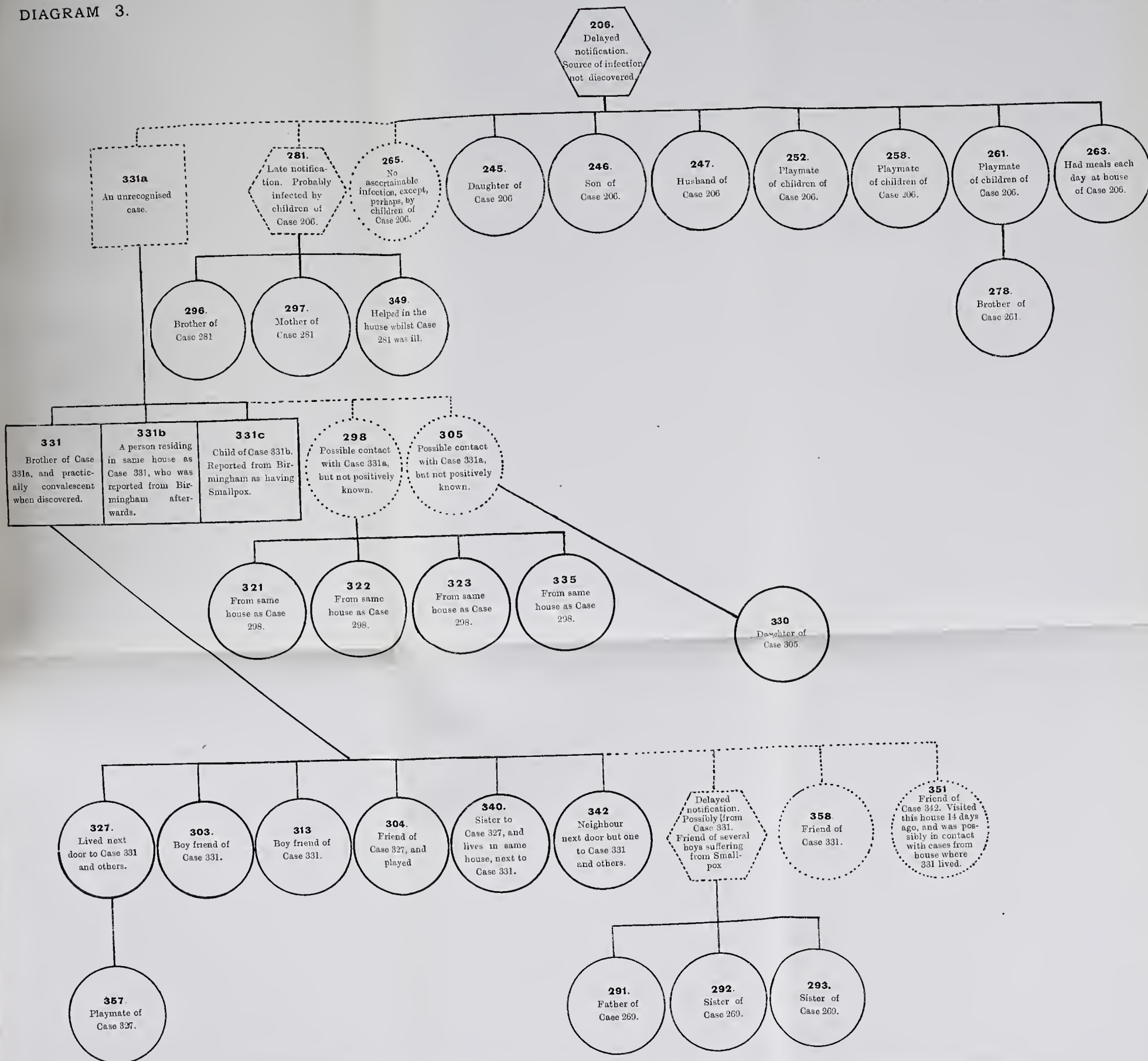
Cases 337, 338, 339, 347, 361, 375, 404, 407, 409, 415, 420, 428, were isolated, and not followed by any known extension.

A mild case of convalescent Smallpox was discovered, which gave rise to Cases 377 and 378.

SMALLPOX, 1904.

Rivett Street Outbreak and Cases associated with it.

DIAGRAM 3.



The following cases were also notified from this district during the time the cases set out in the diagram were being notified, sufficient evidence of contact with the charted cases was not forthcoming to justify their inclusion in this diagram :—

Case 363, which also gave rise to Cases 387 and 401.

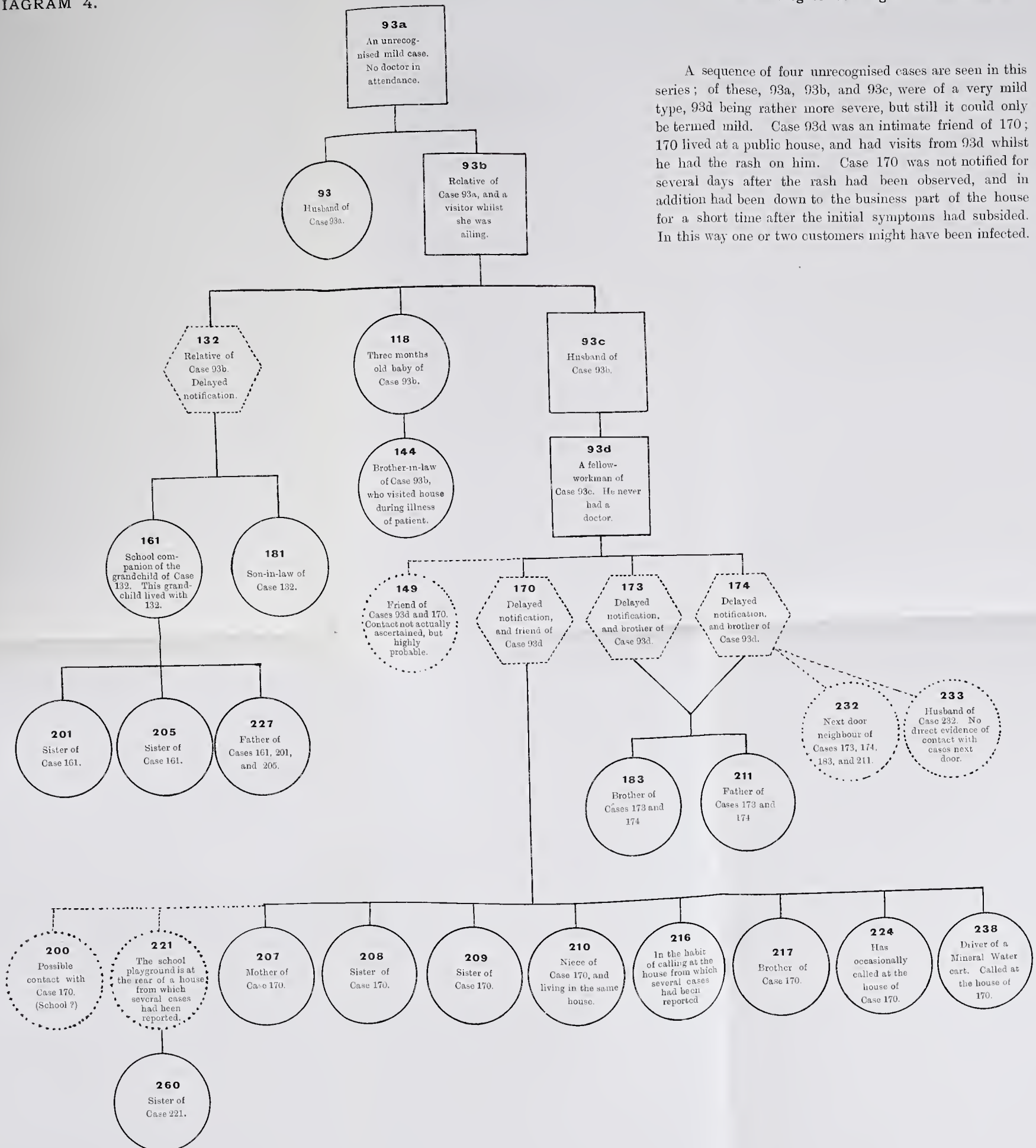
Case 363, which also gave rise to Cases 387 and 401.
Cases 337, 338, 339, 347, 361, 375, 404, 407, 409, 415, 420, 428, were isolated, and not followed by any known extension.
A mild case of convascent Smallpox was discovered, which gave rise to Cases 377 and 378.

SMALLPOX, 1904

DIAGRAM 4.

Series leading to Carrington Street Cases.

A sequence of four unrecognised cases are seen in this series; of these, 93a, 93b, and 93c, were of a very mild type, 93d being rather more severe, but still it could only be termed mild. Case 93d was an intimate friend of 170; 170 lived at a public house, and had visits from 93d whilst he had the rash on him. Case 170 was not notified for several days after the rash had been observed, and in addition had been down to the business part of the house for a short time after the initial symptoms had subsided. In this way one or two customers might have been infected.



discovered, (2) hexagons represent cases in which the notification was delayed beyond four or five days from the appearance of the rash, (3) black rings represent cases which were notified within four or five days of the appearance of the rash, and (4) dotted rings indicate that the source of infection has not been clearly established, but that strong presumptive evidence exists that the infection was received as suggested in the diagram. In this way, the influence of late notifications and missed cases is made more evident.

The chief points to which it seems desirable to direct attention in reference to the cases are as follows:—

The large number of Importations of the Disease.—Many towns and villages in Derbyshire and neighbouring counties suffered more or less severely from Smallpox during 1904. Persons who had been infected in various places reached this town incubating the disease. The town was more exposed to this possibility during 1904 than in previous years, owing to the fact that it was a centre towards which many travelling labourers, navvies, and others made their way owing to the large amount of labour required for the sewage disposal works at Alvaston, the new system of sewerage and tramways which employed a large number of men, and the waterworks extensions at Little Eaton.

Type of Disease.—The cases on the whole were of an exceptionally mild character. This tendency was evident among the unvaccinated, as well as among the vaccinated.

Missed Cases.—The mildness of type resulted in a number of cases being overlooked; and, in addition, instances of delayed notifications were frequent. It is evident that such cases add to the difficulties of repressing an epidemic, but I must confess to some surprise at the fewness of cases which resulted from these causes. The probability is that in the case of modified Smallpox, the ease with which infective particles become disseminated is somewhat diminished owing to the tendency of the vesicles to dry up and form hard cornified bodies, as compared with the more easily frangible and dispersible scabs which follow the pustulation in unmodified Smallpox, and, in addition, the amount of infective material available for dispersion is probably directly proportionate to the amount of rash.

I observed modified Smallpox in three instances among unvaccinated persons—a most infrequent occurrence.

Complications.—Complications occurring amongst persons under treatment were not frequent. The chief were boils, and occasional corneal ulcer; in one or two instances, slight sloughing resulted in the places where bed-sores usually form. The eye cases invariably recovered with practically no impaired vision.

Mortality.—There were only three deaths from the disease. Of these, one patient also suffered from Pneumonia. He was practically in a moribund condition when the rash made its appearance. The second case was that of an unvaccinated woman, aged 53, who died from Hæmorrhagic Smallpox. The other case was the only death which occurred in the Hospital out of the 202 cases which were there treated; the patient was an unvaccinated child, aged 4 months, suffering from Marasmus, from which it would probably not have recovered had it not been attacked with Smallpox.

Condition as to Vaccination.—The condition as to vaccination of the Hospital cases was as under:—

Vaccinated and showing marks	Males	65	}	112
	Females	47		
Vaccinated and showing no marks	Males	3	}	8
	Females	5		
Unvaccinated 	Males	48	}	82
	Females	34		
Total ... 202				

In addition to the above, 5 persons were stated to have been re-vaccinated, viz., 3 males and 2 females. Of these, 2 males and 1 female had evidence of the operation, the others had not. Twenty unvaccinated persons who suffered from Smallpox submitted themselves to vaccination after exposure to infection, viz., 9 males and 11 females; and 12 persons who had been vaccinated in infancy were re-vaccinated after exposure, viz., 3 males and 9 females. One person had previously suffered from Smallpox.

In addition to the above cases, the condition as to vaccination was ascertained in 11 of the 16 convalescent cases. They were all

vaccinated in infancy. This was likewise the case, I believe, in three others, and in the remaining two cases I have no information. If the doubtfully vaccinated cases be included as vaccinated, the additional figures would show that 59 per cent. of the cases were vaccinated, as against 41 per cent. unvaccinated.

The value of vaccination, as a preventive of Smallpox, has been so completely and conclusively proved, that one feels there is practically no necessity to devote any considerable amount of space to the subject. Derby, however, during the time that records of disease have been kept, viz., from 1876, has enjoyed a considerable immunity from this disease, in consequence of which there has been very little opportunity of referring to the influence of vaccination on Smallpox. The experience of other towns is of value, but on the supposition that local experience will be more convincing, I think the following few points are worth consideration.

In using the above figures for the purpose of proving or disproving the value of vaccination as a preventive of Smallpox, two facts must be borne in mind—viz., that the protective power of vaccination is a diminishing quantity; and also that due regard must be paid to the proportion of vaccinated to unvaccinated persons in the community. The diminishing protective power of vaccination necessitates re-vaccination at or before the age of 14. Up to this age it should be possible to prove that vaccinated persons are less frequently attacked with Smallpox than unvaccinated. On page 38 of this report is a table showing the total of vaccinations in the Borough of Derby from 1873 to 1904, inclusive. If the last 14 years of this period be taken, viz., 1891 to 1904, inclusive, we find that there were 42,337 children born. There were also 5,862 deaths, leaving 36,475 children available for vaccination. Of these children, 10,768 were vaccinated, and 25,707 were not vaccinated. The oldest survivors in this group would, in 1904, have completed 13 years. It is reasonable to assume that the children dying would die in the proportion of vaccinated to unvaccinated, and that the relative proportion of these two classes would be approximately maintained. The figures given for the vaccinated class are an absolute minimum, the number stated *must* have been vaccinated, or the returns would not have been sent in; whilst, on the other hand, there is a possibility of failure to record vaccinations which were done privately. These omissions

would result in such vaccinated children being totalled amongst the unvaccinated, and this would tend to increase the difference between the two classes in favour of the unvaccinated. It is not necessary for my purpose to be able to state the proportion between vaccinated and unvaccinated in exact and precise terms, but I think I am justified in assuming that the figures, 25,707 unvaccinated and 10,768 vaccinated, represent a fair statement of the proportion of unvaccinated persons to vaccinated, under the age of 14 at the present time, and this approximately is $2\frac{1}{2}$ to 1. To make absolutely sure, if another half be added to the unvaccinated proportion to allow for possible error, the proportion would be three to one. I should expect that if vaccination were a useless procedure, and had no influence in warding off attacks of Smallpox, that the proportion of attacks among vaccinated and unvaccinated would approximately bear the same ratio that these two classes bear to each other. But what is the actual state of affairs? At the ages mentioned, 65 persons were discovered suffering from this disease. Of these, 62 were unvaccinated, whilst only three were vaccinated, so that whilst the proportion of the population is as three unvaccinated persons to one vaccinated, the ratio of attacks was as 20 to 1.

If the same method be applied to the population between the ages of 14 to 35, similar results, though not so striking, can be shown. The diminishing protective power of vaccination results in vaccinated persons taking Smallpox at these and later ages in much greater proportion than among those in which the vaccination is less than 14 years old, but still the proportion of attacks among vaccinated and unvaccinated is considerably in favour of the vaccinated.

Character of Attack in relation to Vaccination.—The following table shows the nature of the attacks, under headings which indicate various degrees of severity, differentiated according to vaccinated or unvaccinated at the time of exposure:—

Condition as to Vaccination.	Discrete modified.	Discrete natural.	Severe Discrete.	Semi- Confluent.	Confluent.	Not Smallpox.	Totals.
Vaccinated at time of exposure ...	21	84	1	6	—	—	112
Vaccinated, but showing no marks	—	6	2	—	—	—	8
Unvaccinated at time of exposure ...	3	59	8	10	2	1	83
Totals ...	24	149	11	16	2	1	203

With such a mild type of disease prevailing as has been the case in this outbreak, the proportion of severe cases has been small, but it would not be safe to assume that this unusual type will be maintained in the future. With all its mildness, however, such severe cases as did occur were in greatest proportion among the unvaccinated. Twenty-four per cent. of the unvaccinated attacks were of a severe character, as compared with 6 per cent. among the vaccinated.

Hospital Staff.—Whilst dealing with the question of the efficacy of vaccination, I think the results observed among members of the Hospital staff worth some consideration. The female staff at the Hospital averages in number about 20 persons, all of whom are brought more or less closely into contact with whatever diseases may be under treatment. The matron has been engaged during the whole of the fifteen years the present Hospital has been in use, and for the last two years of the old Rowditch Institution. The case records of persons treated during this period are still available. It is impossible to state exactly the number of persons who have been engaged, but they certainly do not number less than 60, that is representing 20 for the present staff and allowing for two complete changes. Out of all the persons who have been engaged, only three had been protected by a previous attack of Smallpox before they came on duty, and every one was vaccinated or re-vaccinated before or shortly after taking up the work.

I turn for a moment to Scarlet Fever. I have no record of persons among the staff who have previously suffered from Scarlet Fever, but certainly a fair proportion of them had suffered from that ailment; certainly there were more than three. Both Scarlet Fever and Smallpox are infectious diseases, and unprotected persons exposed to the infection of either are liable to be attacked, and no one, I think, will have the temerity to deny that Smallpox is at least as infectious as Scarlet Fever, whilst the majority will probably agree with me that it is very much more so. Probably the best protective against either disease is a previous attack, although that is not an absolutely certain protective. In the case of Scarlet Fever it is not known how any protective power can be imparted to an individual in any other way. In the case of Smallpox, vaccination is only second to a previous attack in conferring immunity. If, therefore, persons, unless protected in the above manner, are exposed to the infection of either of these diseases, we should expect a percentage of them to sicken from the disease; but what has really been our experience? During the last 17 years no fewer than 13 members of the female staff have been treated in the wards of the Borough Hospital for Scarlet Fever contracted in the course of their duties at the Hospital, whilst not a single person, male or female, has ever been attacked with Smallpox; and this, notwithstanding the fact that the protective power of a previous attack had only been acquired by three persons, vaccination being the protective factor in the remainder.

Age and Sex Distribution.—The age and sex distribution of the 202 Hospital cases is contained in the sub-joined table:—

	Under 1 Year	1—5	5—10	10—15	15—20	20—25	25—30	35—45	45—55	55—65	65 up	Total.
Male	—	11	13	10	12	7	20	30	9	4	—	116
Female	5	5	12	9	6	6	22	7	7	5	2	86
Total	5	16	25	19	18	13	42	37	16	9	2	202

This table draws attention to a fact which has already been commented upon, viz., that 32 per cent. of the attacks were on individuals under the age of 15 years. More males are attacked than females. The reason for this is undoubtedly the greater opportunities which males have for spreading infection amongst members of their own sex at work, particularly so with missed cases.

Methods adopted for Checking the Spread of the Disease.—

In the report for the year 1903, the scheme for dealing with Smallpox cases was fully described. It is unnecessary to repeat the procedure, as no alteration has been considered desirable. One fact, however, that I may perhaps be pardoned for again emphasizing is, that a town the size of Derby should be provided with a central disinfecting station and shelter. Hardship frequently results from the people having nowhere to go between the time personal disinfection is completed and the time the house is ready for re-occupation. In this interval, they certainly are free from infection and of no danger to anyone, though it is not surprising that no one cares to entertain a recent Smallpox contact, even for the space of a few hours. I brought a scheme embracing a disinfecting station with baths and sitting-rooms for both infected and disinfected persons, before the Committee, but the cost proved a barrier to the town being provided with what is an undoubted necessity.

The following is a copy of the poster which was freely exhibited in the town during the time the disease was most prevalent:—

COUNTY BOROUGH OF DERBY.

SMALLPOX.

VACCINATION.

Smallpox has made its appearance in Derby.

The only adequate protection against Smallpox is successful recent Vaccination.

All persons who have not been Vaccinated within seven years should be Vaccinated as soon as possible.

Vaccination may be obtained, free of cost, from the Public Vaccinators, whose names and addresses are given below. Re-vaccination may likewise be obtained, free of cost, by persons who have not been Vaccinated within the last 10 years.

Dr. T. LAWRIE GENTLES, of 116, London Road, is the Public Vaccinator for the South District.

Dr. WM. H. WRIGHT, of 148, Pear Tree Road, is the Public Vaccinator for the North District.

DISTRICTS.—For Vaccination purposes the town is divided into North and South Districts by an imaginary line drawn down the middle of the

Uttoxeter New Road, Bramble Street, Becket Street, The Wardwick, Victoria Street, Albert Street, and the Brook course following the direction of the River southwardly.

Printed by order of the Sanitary Committee.

MEDICAL OFFICER OF HEALTH.

Public Health Department,
Ford Street, Derby.

The subjoined handbill was distributed from house to house in infected districts:—

COUNTY BOROUGH OF DERBY.

SMALLPOX.

NOTICE.

1. Smallpox is prevalent in this town to a serious extent.
2. Unprotected or incompletely protected persons coming into contact with Smallpox are liable to be attacked.
3. Unprotected persons are those who have never been successfully Vaccinated, and incompletely protected persons are those who have not been successfully Vaccinated for some years.
4. Successful Vaccination is an absolute safeguard against Smallpox for some years, the period varying with the number and size of the vaccination marks, and with individual peculiarity.
5. Vaccination is quite safe when performed with proper precautions.
6. Any case of Chicken-pox should at the present time be carefully considered by the head of the house in which it occurs. Chicken-pox is distinguished from Smallpox by the fact that in Chicken-pox the patients are mostly children, and are not, as a rule, taken seriously ill. There is more eruption in Chicken-pox on the body, face and head than there is on the arms and the legs; it comes out in several crops, and the clear vesicles or blisters differ considerably in size.
7. Smallpox on the other hand, even in a very mild case, begins suddenly with head-ache, fever, often pain in the back, and a sense of severe illness. The eruption, as a rule, appears on the face on the third day, and later on may be noticed on the trunk, and arms and legs, though in a mild case there is very little rash on the front of the body. After the eruption appears the sense of illness disappears, and this frequently allays suspicion as to the nature of the illness. This peculiar characteristic of Smallpox has frequently resulted in many of the mild cases being mistaken for Chicken-pox, with serious consequences. Where any such illness occurs in a family a Doctor should be called in, or the Medical Officer of Health should be notified.

8. At the present time it is desirable that every case of Chicken-pox should be seen by a medical man lest mild Smallpox should be mistaken for Chicken-pox, for even mild Smallpox may give rise to a fatal attack in others.

9. You are strongly advised at the present time to protect yourselves and your family and dependents by vaccination.

10. Vaccination may be performed either by your own medical attendant or by the Public Vaccinator of your district. The latter will vaccinate free of charge.

11. Persons desiring Vaccination to be performed by the Public Vaccinator should write him requesting him to call at their homes, or they must call at his surgery.

12. The names of the Public Vaccinators with their addresses are set out on the back of this leaflet.

MEDICAL OFFICER OF HEALTH.

Public Health Department,
Ford Street, Derby.

In conclusion, I desire to express my sincere appreciation of the energetic manner in which the three district inspectors and the special inspector performed their duties during a most trying time. The details of the work were personally supervised by myself, with the assistance of my two clerks. The Chief Inspector was not able to render any assistance owing to the pressure on his time of duties, multitudinous and various, many of which hardly come under the heading of sanitary work. The monetary grants made by the Committee to these officials referred to, and to the staff at the Hospital, were exceedingly appreciated, and the best testimonial which I can tender to the Hospital staff is that in not a single instance was infection from the Hospital traced nor even suggested.

Vaccination.—As might be expected, the prevalence of Smallpox in the town resulted in a considerable increase in the number of vaccinations. Forty-eight per cent. of available children were vaccinated. This is a higher percentage than in any year since 1891, with the exception of last year, when a similar percentage was noted.

I am indebted to Mr. Payne, Vaccination Officer, for the information from which the following table has been prepared:—

TABLE VIII.—*Showing the percentage of successful Vaccinations in the Borough of Derby for the 11 years 1873-83, and for each year from 1884-1904.*

Year.	Births.	Died un-vaccinated.	Insusceptible and postponed	Total available Children.	Successfully Vaccinated.	Percentage of Children Vaccinated.
11 Years						
1873-83	31,011	3,767	180	27,244	24,723	90·7
1881	2,882	356	7	2,526	1,673	66
1885	2,901	337	41	2,567	2,151	83·
1886	2,896	328	39	2,568	2,363	92·
1887	2,673	281	30	2,392	2,209	92·
1888	2,720	306	47	2,411	2,186	90·
1889	2,707	314	12	2,393	2,032	81·
1890	2,597	289	4	2,308	1,893	82·
1891	2,914	368	5	2,546	1,681	66·
1892	3,015	428	5	2,587	1,131	43·
1893	3,142	420	4	2,722	737	27·
1894	2,934	345	2	2,589	453	17·
1895	2,941	454	4	2,487	283	11·
1896	2,876	406	3	2,470	210	8·
1897	2,826	430	1	2,396	145	6·
1898	2,869	389	0	2,480	330	13·
1899	3,000	475	292	2,525	784	31·
1900	2,935	483	78	2,447	432	18·
*1901	3,016	449	158	2,597	796	31·
*1902	3,277	388	15	2,874	1,137	40·
*1903	3,244	377	159	2,708	1,307	48·
*1904	3,318	445	125	2,748	1,339	48·

*Added area included.

Mr. W. H. Whiston informs me that the number of exemption certificates granted under the Vaccination Act during the year 1904 to persons resident within the Borough was 220, as compared with 257 in 1903. There were 8 certificates granted to persons residing outside the Borough of Derby, as compared with 11 in the previous year.

Scarlet Fever:—

Mortality from Scarlet Fever during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·14	0·22	0·17	0·07	0·07	0·03	0·11	0·12

The number of cases of Scarlet Fever notified was 638, the highest number since 1899. The increase in this disease began to be noticeable about the middle of the third quarter and continued throughout the fourth, showing signs of abating at the end of that period. During the second quarter, only 34 cases were reported. I have drawn attention to the fact that the Borough Hospital was practically closed throughout the year to Scarlet

Fever, with the result that cases presenting considerable urgency from the point of view of defective home isolation had to be dealt with in the best manner possible. A nurse was engaged to assist in the more difficult and serious cases. The disease was of an exceedingly mild type, and deaths were few. It chiefly affected the Firs Estate district, and with the exception of any general hospital isolation, the epidemic was dealt with on the usual lines. There were only four deaths out of the 638 cases. The mortality recorded was considerably less than either the last ten years' average, or the rate recorded in England and Wales, or the 76 great towns.

Diphtheria :—

Mortality from Diphtheria during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·09	0·09	0·19	0·10	0·07	0·25	0·17	0·19

During the year there were 150 cases of Diphtheria notified, of which 4 were of strangers. The net total of Borough cases, 146, does not compare favourably with previous records. During the year 1903 there was a marked increase compared with previous years, but the total, 83, fell far short of last year's number. It is not possible to ascribe the increase to any single cause, but probably the chief factors were dissemination of infection by "missed" cases, and perhaps a continuance of the infection in the throats of some convalescents after the restrictions attendant upon isolation had been removed. This latter is an important matter, and owing to a continuance of the notifications during the present year certain investigations have been made, the results of which will be embodied in a special report which will be presented for your consideration in the near future. As with the number of notifications, the mortality likewise increased. The town has been markedly free from this disease in the past, as may be gathered from Table VI., page 21, and from the fact that the last ten years' average mortality is only 0·09 per 1,000, but during the year under review it was 0·25 per 1,000, a rate which was higher than that recorded in England and Wales, and also in the 76 great towns. Compared with previous years, there was also a distinct tendency to a more severe type of the disease, although I saw numerous cases which presented hardly any other local or

general symptoms than would be noted in a case of severe sore throat. In 1903, there were only three deaths among the 83 notified cases; but in 1904 there were 29 deaths among 150 cases. It is satisfactory to note that at the time of writing the report, the number of cases being reported has apparently descended to the former satisfactory level.

Measles :—

Mortality from Measles during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·33	0·93	0·00	0·33	0·01	0·12	0·36	0·47

The mortality from Measles was higher than that recorded last year. There were 15 deaths registered, which represent a rate of 0·12 per 1,000, as compared with 0·33, the average for ten years. Fourteen out of the fifteen deaths were among children under the age of five years. The cases were specially prevalent in the last quarter of the year, and in the districts of Abbey and Osmaston Wards. The usual preventive measures were adopted.

Whooping Cough :—

Mortality from Whooping Cough during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·28	0·50	0·28	0·25	0·27	0·23	0·34	0·40

There were 28 deaths attributed to Whooping Cough, as compared with 32 in the previous year. The rate is slightly below the ten years' average, and is less than that recorded in England and Wales, and the 76 great towns. The whole of the deaths were among children under 5 years of age. The disease was prevalent throughout the whole of the town, practically no district being free from it. It is not a notifiable disease; and the first information is usually derived from the school returns.

Diarrhœa :—

Mortality from Diarrhœa during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby	England and Wales.	76 Great Towns.
Rate per 1,000.	0·76	0·48	0·99	0·39	0·38	0·68	0·86	1·20

The deaths from Diarrhœa numbered 82, as compared with 51 in the previous year. Sixty-one of these deaths were of children under one year of age. The mortality is equal to a rate of 0·68 per 1,000, which is slightly lower than the ten years' average, and compares favourably with the mortality recorded in England and Wales as a whole. In addition to these deaths, there were 12 deaths registered from Enteritis; 8 of which were of children in the first year of life. The usual preventive measures, which have been fully referred to in previous reports, have been continued.

Enteric Fever:—

Mortality from Enteric Fever during the past five years.

Year.	Ten Years' Average.	1900	1901	1902	1903	1904.		
						Derby.	England and Wales.	76 Great Towns.
Rate per 1,000.	0·19	0·21	0·20	0·12	0·06	0·05	0·09	0·10

There were 63 cases of Enteric Fever notified during the year, of which number, 9 were of strangers who had been brought from districts outside the Borough boundaries to the Royal Infirmary for treatment. This compares satisfactorily with the 62 cases notified in 1903, of which two were of strangers. Among the Borough cases there were 6 deaths, which is equivalent to a case mortality of 11·2 per cent., and a general mortality of 0·05 per 1,000 of the population. Prior to the year 1903, I have always had the disagreeable duty of directing attention to the fact that the death-rate from Enteric Fever in Derby was much higher than that recorded in England and Wales; and that this high death-rate from what is regarded as the best example of a fifth disease had an increased importance, because the death-rate in this town from "all causes" compared favourably with the rate recorded in the country as a whole. The Sanitary Department has striven hard to remove the causes which predispose to this disease, and the fact that the favourable rate of last year was still further improved during the year under review, encourages a hope that those efforts are being rewarded. The death-rate from "fever" is about one-fourth the previous ten years' average; it is only half that recorded in the 76 great towns, and rather more than half the rate attributed to England and Wales.

The age incidence of the persons attacked, and the fatal cases resulting therefrom, are shown in the following tabulation:—

Years of Age.

	Under 1	1 and under 5	5 and under 10	10 and under 15	15 and under 20	20 and under 25	25 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and under 50	50 and upwards	Total.
Attacked ...	0	6	10	6	13	6	2	5	2	5	4	4	63
Died ...	0	1	0	0	0	2	0	0	1	1	1	0	6

In previous years the tabulation of cases according to their probable cause of origin has shown the great incidence of attacks on persons living in houses where sanitary defects of a more or less gross character were discovered. This differentiation of cases is continued this year, but on this occasion the cases recorded under the heading "direct infection" are most numerous. They are an instructive series of cases, and are worth being reported in more detail, as it has not been my experience to have investigated cases in which the danger from unrecognised cases of Enteric Fever has been so distinctly shown.

FIRST SERIES.—During the midsummer school vacation, a girl, Nellie L., went on a visit to Sheffield. She returned at the end of August, and brought back with her a child aged three years, named Martin W. After about 10 days this child Martin was taken ill with diarrhœa and sickness, the motions being exceedingly offensive. This child was nursed by Mrs. L., and occasionally by her sister, Mrs. B., who lives in the same street. Mrs. L. and Mrs. B. have children of their own, and all took a turn in nursing this sickly infant. It was not thought to be anything serious, and recovered thoroughly. Between October 10th and October 27th, severe cases of Enteric Fever were reported from these two houses, viz., Mrs. L. and two children, and Mrs. B. and three children. I investigated these illnesses, and as the illness from which the child aged three suffered was apparently Enteric Fever, I took a specimen of blood from the child Martin W., which I sent to Professor Delépine for examination, who reported that the serum gave a typhoid re-action, and thus removed any possible doubt. The dates pointed to the infection of the five children and Mrs. L. by this child, Martin W., and to the infection of Mrs. B. from nursing her own three children. This was not the end of the cases, for on November 3rd notification was received that two

young persons, neighbours of the above families, were suffering, and I considered that they had been infected by B's children; this made a total of nine cases either directly infected by the first unrecognised case, or by cases arising in consequence of it.

SECOND SERIES.—On July 29th, a boy, Harold S., fell into the canal. On September 5th, this boy was taken ill with a rather indefinite sort of illness. On October 5th, I was asked to see two brothers and two sisters of this boy, who were all suffering from febrile attacks. Apparently they all had Typhoid Fever, the diagnosis being corroborated by the serum—in the cases which were examined—giving a typhoid re-action. In addition, the serum of the boy Harold S. was examined, and in this instance also a typhoid re-action was obtained. Subsequently, a married sister of these patients was reported as suffering from Enteric Fever. She had been a frequent visitor at the house and had helped to nurse the patients. There is practically no doubt that these five cases were infected by Harold S., who had had a mild attack of Enteric, the extension of the disease being favoured by domestic conditions, the house and rooms being rather small for the size of the family.

THIRD SERIES.—On October 15th, I received information from the Infirmary authorities that three cases of Typhoid Fever had been admitted into that Institution from a farm in one of the rural districts outside Derby. Another case from the same house was notified on October 18th, and a further case on October 23rd. As the occupier of this farm was a registered milk seller in the Borough of Derby, I visited the farm after the receipt of the first three notifications, with the knowledge and approval of the Medical Officer of Health for that district. In making enquiries relating to the milk supply, I ascertained that a boy was living on the farm who had come there some time previously suffering from an indefinite kind of illness. It seemed probable that this child might have had an unrecognised attack of Enteric Fever, and correspondence showed that the same opinion was held by the Medical Officer for that district. A specimen of this boy's blood was examined by the Widal method with a positive result, and thus the suspicion as to the probable origin became a practical certainty. Fortunately, no extension was notified among the customers, and what might possibly have been a serious outbreak was limited to the occupants of the farm.

These series of cases emphasize the importance of direct infection as a factor in the spread of Enteric Fever, and the necessity for every care being exercised by those nursing such cases, particularly when the accommodation available is so limited as in the average dwelling-house.

The number of persons who were possibly infected whilst away on their annual holiday was much less than usual, and in only one instance could the ingestion of shell-fish be more or less remotely associated with the attack. The number of attacks placed under the heading of "other cases" is again large, and as in previous years it is probable that many are doubtful cases. In two instances post-mortem examinations showed this to be so, one being a case of Phthisis, and in the other the fatal illness was the result of an obscure abdominal complaint.

The various cases are classified in the following tabulation; the headings are those which have been used in previous years:—

TABLE IX.—An analysis of the cases of Enteric Fever notified during the year 1904.

A.—Cases in which Sanitary defects were prominent.

Pro- gressive No.	Age.	Sex.	Sanitary Conveniences.				Nuisances.	Remarks.
			W.C.	Pail.	Privy	Privy Cess- pool.		
19	19	F.	1	...	Defective privy and ashpit.	Adjoining canal.
49	2	M.	1	...	...	...	Drains under house.
63	45	M.	...	...	1	...	Privy ashpit, D traps.
162	23	F.	...	1	Defective drains, traps, and closets.	Objectionable eufflvia.
178	37	M.	...	...	1	...	Privies just converted.
299	4	M.	1	...	...	...	Iron traps. Choked gullies.
467	18	M.	1	...	...	...	Defective inspection chamber.
568	16	F.	...	...	1	...	Offensive privies and ashpit.
913	2	M.	1	...	...	...	Drains recently relaid.
1103	32	M.	1	Drains recently relaid.	
1106	3	M.	...	1	Iron D traps. Pail closet.	
1208	22	M.	1	...	Offensive privy and ashpit.	

B.—Cases in which visits to other towns were made prior to onset.

368	44	F.	1	...	...	..	No nuisances.	Returned from visit to neighbouring village two weeks previous to notification.
373	19	M.	1	...	...	...	No nuisances.	Visited a neighbouring village and drank water from well attached to an empty house.
448	19	M.	...	...	1	...	No complaints.	Attacked with illness in another town; returned to Derby feeling ill.
525	52	F.	1	...	...	...	No complaints.	Attacked after return from holidays at East Coast watering place.

C.—Cases in which direct infection was the probable cause.

374	3	F.	1	...	...	...	...	...	From brother, 373.
398	17	F.	1	...	...	...	...	...	" "
657	21	M.	1	...	...	...	...	...	From brother (an unrecognised case).
658	17	F.	1	...	...	...	...	...	From same case as No. 657.
669	13	F.	1	...	...	...	...	...	" " "
671	6	M.	1	..	...	...	...	...	" " "
691	27	F.	1	...	...	...	...	...	" " "

Pro- gressive No.	Age.	Sex.	Sanitary Conveniences.				Nuisances.			Remarks.
			W.C.	Pail.	Privy	Privy Cess- pool.				
701	13	F.	...	1	...	...	...	...	...	From unrecognized case.
702	11	F.	...	1	...	...	..	...	...	From same case as 691.
745	45	F.	...	1	...	...	...	...	...	" " "
807	6	F.	...	1	...	...	...	...	...	" " "
808	4	F.	...	1	...	...	...	...	...	" " "
811	8	M.	...	1	...	...	...	.	...	" " "
876	33	F.	...	1	...	...	...	...	...	" " "
904	12	M.	1	...	...	...	...	...	...	" " "
905	19	F.	1	...	...	...	...	...	...	" " "

D.—Eating of Shell-fish probable cause.

1086	24	F.	1	No nuisances.			Partook freely of oysters at period corresponding to incubation.
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E.—Other Cases.

12	19	M	...	1	No complaints.			Patient also had pneumonia.
78	45	M.	1	None.			Complained of having inhaled sewer gas.
79	19	M.	...	1	...	...	No complaints.			
225	62	M.	1	...	...	...	"	"
283	10	F.	1	...	...	...	"	"
312	52	M.	...	...	1	...	Note privy.			
393	21	M.	1	...	..	...	No complaints.			Death certificate gave "phthisis" as the cause of death,
421	45	F.	1	...	...	...	"	"
439	32	M.	1	...	...	...	"	"		Not enteric.
498	12	M.	1	...	...	...	"	"
519	7	M.	1	...	...	...	"	"		Possibly gastro-enteritis not zymotic in origin.
645	9	M.	1	..	...	...	"	"
660	40	F.	1	...	...	...	"	"		Recently recovered from small-pox.
816	36	M.	1	...	..	...	"	"
858	5	M.	1	...	...	...	"	"
1136	9	M.	1	.	...	...	"	"		Sewerage excavations in front of house.
453	39	M.	1	...	...	...	..	..	..	Continued Fever.

Puerperal Fever.—There were 16 cases of Puerperal Fever notified during the year, among which there were 10 deaths, as compared with 14 cases notified during the previous year with 6 deaths. The usual precautionary measures, which include the disinfection of the clothing of the midwife in attendance on the case, and almost invariably the disinfection of the midwife's residence, have been continued.

Midwives' Act.—A considerable amount of additional work devolves on the staff of the Medical Officer of Health in consequence of the provisions of the Midwives' Act. The various details in reference to registration, and notification of intention to practice, as well as the visitation of midwives' homes, all take up a certain amount of time. There are at present in the Borough 55 registered midwives, all of whom have signified their intention to practice within the Borough boundaries. Twenty-seven records of midwives having had to send for medical assistance have been received, and the notification of 15 still-births have been forwarded by midwives who were in attendance. In addition, I have personally visited the homes of a large number of midwives, and inspected their outfits and case books. The evidence obtained points distinctly to the fact that such persons are endeavouring to perform their work in a manner which can, on the whole, be regarded as satisfactory.

After the notification of a case of Puerperal Fever, it has been my practice to interview the midwife in attendance, and nine midwives have been requested to attend at my office on that account. A communication is forwarded to the medical man in charge of the case, and from him is generally obtained an expression of opinion as to the circumstances relating to the case, following which an arrangement is arrived at between myself and the midwife whereby she should cease attending further cases for a short period; and, in the interval, her house, clothing, and appliances are subjected to a careful disinfection. It has not been found necessary to make a formal report to the Central Midwives' Board respecting any person practising in this town.

Tubercular Diseases.—The deaths from Pulmonary Phthisis numbered 121, as against 102 in the previous year, the corresponding death-rates per 1,000 of the population being 1·01 and 0·86. Until the present year, there has been a progressive yearly decline in the rate of mortality from Pulmonary Phthisis since

1898. The deaths from "other tubercular diseases" numbered 64, as compared with 62 in the previous year.

The scheme of voluntary notification, which was started in 1902, has again worked satisfactorily during the year under review. It is now thoroughly well established, and the method of working it apparently meets with the approval of the medical men practising in the town, since no friction results, if the absence of such may be assumed from the fact that no complaints have been made.

The value of the scheme is of course dependent upon the completeness of the notification, and upon the duration, of the illness prior to notification. I think the great majority of the cases came to my knowledge as tested by the death returns; but, as would be expected, a proportion are nearing the end before the information is received. During the first two years of the work, the number of late cases was relatively higher than the number last year. The subsequent average duration of the illness of cases which are now brought to my notice is sufficient to justify the time devoted to this work, since it allows of the adoption of preventive measures of considerable value. The following table is interesting from this point of view:—

Interval between receipt of notification and death of patient.

	Under 1 month.	1 and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	12 and under 15 months.	Over 2 & under 2½ years.	Total.
1902	11	18	3	1	3	...	1	40
1903	22	11	5	12	8	1	...	59
1904	14	15	8	4	4	...	...	45
All cases	50	44	16	17	15	1	1	144

As regards the cases reported during the last three years, the diagnosis has been amended in seven instances; three in each of the first two years and one last year. Only two cases have been reported as cured, but in these instances there is reason to believe that the diagnosis might not have been correct. In 25 instances the persons have not been kept under observation owing to their having left the district, or on account of having removed, and the

nurse has not found it possible to ascertain the new address. At the present time (April, 1905), 94 cases are being visited; and from the following table it will be seen that 8 of these cases were notified in 1902, 34 in 1903, and 52 during the year 1904:—

Phthisis notifications other than known fatal cases.

	Cases said not to be Phthisis.	Cases said to have recovered.	Strangers and not followed.	Left district or changed address.	Still being visited by Corporation Nurse.
1902	3	2	1	6	8
1903	3	...	10	12	34
1904	1	...	8	7	52
Totals	7	2	19	25	94

The total number of cases notified was 127; of these 15 were re-notifications, and 9 were of strangers brought into the various Institutions for treatment. The following are the totals compared with the two previous years:—

YEAR.	Private Practitioners.	Institutions.	Poor Law cases.	Total.
July 1 to Dec. 31, 1902	35	17	5	57
1903	42	71	6	119
1904	42	73	12	127

The age incidence of the persons attacked is as follows:—

	At all Ages.	0—15	15—25	25—45	45—65	65 upwards.
Males ...	58	5	15	29	10	4
Females	45	5	11	21	8	...
Total ...	103	10	26	45	18	4

The age distribution of cases shows that the chief incidence is on persons between the ages of 25 and 45, and next at ages 15-25. This fact has been previously commented upon, and attention directed to results which follow the incidence of Phthisis upon persons in the prime of life. The removal of the head of the family, particularly when there are several young children, frequently results in all-round impoverishment, with consequent weakened constitutions—a condition which favours infection by the tubercle bacillus; and thus the disease is continued in the family until several members of it have been removed, which gives rise to an exaggerated impression as to the influence of heredity as a causative factor. Provision for the bacteriological examination of the sputum of persons suspected of suffering from phthisis has been made by arrangement with Professor Delépine, of the Owen's College, Manchester. This opportunity has not been taken advantage of to any considerable extent, inasmuch as only 12 specimens were forwarded for examination. In six cases tubercle bacilli were found; in the other six the result was negative.

Enquiries into the occupations of the persons notified, elicited the information that 11 persons were engaged in the various textile trades, but no particular branch showed excessive incidence; 12 persons were engaged in working in metal, 4 girls and 3 boys were of school age, and 17 women who were attacked had only domestic duties to perform. Detailed information is contained in the subjoined tabulation:—

<i>Textile Workers.</i>			<i>Metal Workers.</i>		
Tape Weavers	...	2	Metal Planer	...	1
Elastic Weavers	..	3	Iron Turner	...	2
Silk Winders	...	3	Machine Hand	...	1
Lace Hands	...	2	Brass Turner	...	1
Net Worker	...	1	„ Filer	...	1
			Iron Moulder	...	1
			Grinder	...	1
<i>Clerks.</i>					
G.P.O.	...	1			
Colliery Co.'s	...	1			
Railway	...	1			

<i>Various (Males).</i>				<i>Various Occupations</i> <i>(female)</i>			
Forgemen	...	...	1	House Duties	...	...	17
Fitters	..	...	2	Laundresses	...	...	3
Spring Maker		...	1	Barmaids	...	...	4
Bootmaker	...	...	1	Schoolgirls	...	...	4
Ostler	...	...	1	Others	...	...	5
Saddler	...	...	1				
Cobbler	...	...	1				
Joiner	...	...	1				
Dyer	...	...	1				
Skinyard	...	...	1				
Innkeeper	...	...	1				
Shop Assistants		...	3				
Painters	...	...	2				
Hawkers	...	...	2				
Compositor	...	...	1				
Printer	...	...	1				
Soldiers	...	...	3				
Millwright	...	...	1				
Carriage Finisher	...	...	1				

Labourers.

Plasterers	...	...	1
Brewery	...	...	1
General	...	...	3
Railway	...	...	1
Warehouse	...	...	1

An attempt has been made to obtain the source of infection of persons reported as suffering from Phthisis, and the two most striking points thus elicited are, the large number of cases which obviously had origin from direct association with a previous case, and the still larger number of cases in which the onset of the illness was associated by the patient with some previous illness. Among the class grouped together as "other cases," intemperance, poverty, exposure, and poor physique are the chief points to which attention was directed when making enquiries.

SERIES 1.—Probably direct infection.

Case 16.—This patient's brother died of Consumption, March, 1903. Mother previously died from same disease.

Case 17.—This patient's father is now unable to work suffering from Consumption in an advanced stage.

Case 19.—The father of this patient and four brothers and sisters died from Consumption.

Case 22.—This patient's son died from Consumption two years ago.

Case 26.—Girl, aged 14. Father died of Consumption two years ago.

Case 28.—Patient aged 5 years. Father and mother both died of Consumption, as well as maternal and paternal aunts.

Case 31.—Age of patient, 24. Father died of Consumption, and onset of this illness dates from an attack of Influenza.

Case 36.—Patient aged 10. Father, mother, and two sisters died of Consumption.

Case 38.—Several of this patient's brothers and sisters died of Consumption, as well as several maternal uncles and aunts.

Case 48.—This patient nursed mother and brother, both of whom died of Consumption only a few months ago.

Case 63.—This patient lost four children from Consumption, the last one twelve months ago.

Case 68.—This patient nursed her daughter, who died from Consumption two years ago.

Case 75.—This patient's sister has already been notified as suffering from Consumption

Case 91.—Patient's father recently died from Phthisis.

Case 100.—Mother and seven sisters of this patient have died from Consumption.

Case 113.—Grandmother, father, and sister of this patient died of Consumption.

Case 123.—This patient's mother died of Consumption, as likewise did several members of mother's family.

SERIES 2.—Cases characterised by marked family history of Phthisis, but no recent contact with such cases.

Case 14.—Two brothers, two cousins, and an aunt have died from Consumption. Occupation, iron turner.

Case 23.—The grandfather of this patient died from Consumption. Patient's age, 13.

Case 29.—Patient, aged 5 years. Was a frequent visitor to paternal aunt, who died of Consumption two years ago.

Case 65.—Mother, brother, and first wife died from Consumption; last death seven years ago. Had an attack of Influenza two years ago to which he attributes his illness.

Case 69.—This patient's brother died from Consumption six years ago; he dates his illness from an attack of Influenza and Pneumonia eight months ago.

Case 93.—Sister died of Phthisis eight years ago.

SERIES 3.—Notifications received of persons who have been in frequent contact with persons suffering from Phthisis.

Case 51.—This patient is a bootmaker, and for two years he used to permit a consumptive to come and sit with him whilst at work.

SERIES 4.—Cases following illness.

Case 7.—Recently suffered from Pneumonia. Served as soldier in India and Afghanistan.

Case 15.—This patient's illness began with Influenza with Pneumonia as a complication.

Case 18.—This patient has suffered from Bronchitis and Asthma during the past four years.

Case 20.—Onset of illness attributed to series of chills resulting from work as laundress. Also said to be suffering from chronic heart disease.

Case 27.—Onset of illness attributed to attack of Pneumonia.

Case 30.—Suffered from repeated attacks of Bronchial Catarrh for years.

Case 32.—Onset of illness attributed to several attacks of Bronchial Catarrh with a very short interval between each.

Case 39.—Patient's present illness followed severe attack of Influenza. Consumption in family.

Case 55.—Present illness followed attack of Pneumonia.

Case 56.—Eighteen months previous to notification, patient underwent an operation for abscess on lungs.

Case 58.—Disease said to be consequent on attack of Pneumonia.

Case 61.—Repeated attacks of Bronchial Catarrh are said to have predisposed to the illness.

Case 62.—Debility following child-birth is given as the cause of the present illness.

Case 67.—Was a sufferer among the series of food poisoning cases.

Case 79.—Patient has repeatedly suffered from lung ailments.

Case 81.—Pneumonia and Pleurisy two years ago given as starting point of this patient's illness.

Case 83.—Onset of present illness said to date from attack of Influenza some years ago.

Case 85.—Illness attributed to Acute Pleurisy a few months ago, and exposure to bad weather.

Case 102.—This patient has suffered from repeated attacks of Bronchitis.

Case 106.—This patient suffered from lead-poisoning 12 months ago, and subsequently from Diabetes.

Case 114.—Acute Pleurisy followed by Influenza are given as exciting causes in this case.

Case 118.—This patient suffered from Anæmia and acute Pleurisy.

SERIES 5.—Other Cases.

Case 1.—Patient exposed to all weathers. Lives at Common Lodging-houses. Is a heavy cigarette smoker. Delicate physique.

Case 2.—Hard drinker. Delicate physique. Lives at Common Lodging-houses.

Case 4.—Neglect, poverty, and insufficient food apparently chief contributory causes.

Case 5.—Delicate person—works in humid atmosphere.

Case 21.—Personal habits of this patient are characterised by marked intemperance.

Case 42.—Since death of this patient's wife three years ago, he has been a heavy drinker.

Case 45.—This patient has had charge of a sand-paperying machine. Occupation a dusty one.

Case 50.—Poverty, with attendant hardships and insufficient food, are given as predisposing causes in this case.

Case 54.—Patient much exposed to weather changes.

Case 71.—Present illness attributed to attack of Pleurisy, previous to which patient was extremely weak.

Case 78.—Very much exposed to severe weather, and has always had a delicate constitution.

Case 82.—Delicate child whose brother suffers from Spinal Curvature.

Case 107.—In this case the onset of the disease is attributed to careless personal habits of patient.

Influenza.—Influenza was registered as the cause of 30 deaths, as compared with 27 deaths last year. This number is about equal to the average of the last ten years. The largest number of deaths occurred between the ages of 25 and 65. There were three deaths registered under the age of one year, as compared with two at this early period of life in 1903.

School Notifications.—During the year 197 notification forms were received from the various schools within the Borough, on which were notified the following cases:—

Smallpox	...	9	Mumps	...	...	20
Scarlet Fever	...	78	Whooping Cough			11
Diphtheria	...	5	Other Diseases	...		33
Enteric Fever	...	3				—
Chicken-pox	...	54				
Measles	...	224	Total	...		437

These notifications were dealt with as in previous years. All cases of suspected disease belonging to the legally notifiable class were given to the district inspectors for investigation, the others

being visited by the female staff. Two reports—half-yearly—have been made to the Education Committee dealing with special work appertaining to the medical inspection of schools. These reports were printed and circulated, and no further reference is necessary.

Factories and Workshops.

FACTORY AND WORKSHOP ACT.—Section 132 of the Factory and Workshop Act, 1901, provides that:—"The Medical Officer of Health of every District Council shall, in his Annual Report to them, report specifically on the administration of this Act in workshops and work places, and he shall send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State." The following is a summary of the work which has been done in respect to factories and workshops in 1904:—

FACTORIES.—The factory inspectors appointed by the Home Office are chiefly responsible for the administration of the law relating to factories. The question of means of escape in case of fire, and the provision of suitable sanitary conveniences for each sex are the chief matters for which the local Authority has any responsibility. The former matter is dealt with by the Borough Surveyor, and eight visits have been made by the Inspector in reference to the latter. Several defects which were discovered were referred to the Borough Surveyor to report upon in accordance with Section 22 of the Public Health Acts Amendment Act, 1890.

WORKSHOPS.—The number of workshops on the register, and the various trades carried on therein, are shown in the following table:—

List of Workshops.

Trade	No.	Trade	No.
Artificial Limb Maker	1	Paper Bag Making ...	2
Bakehouses ...	156	Parchment Works ...	1
Basket Maker ...	2	Photographer ...	1
Beer Bottlers ...	2	Pinafore Making ...	1
Blacksmiths ...	5	Plumber ...	4
Brush Maker ...	1	Rope Maker ...	1
Cabinet Makers ...	12	Saddlery ...	2
Carpenter & Joiner ...	7	Shoe Maker ...	14
Coach Builder ...	5	Soap Boiling ...	1
Confectionery ...	1	Spar Turner ...	1
Cork Cutter ...	1	Tailoring ...	33
Currier ...	1	Tape Drying ...	1
Cycle Works ...	4	Tinsmith ...	4
Dressmaking ...	81	Tripc Dresser ...	3
Fruit Preserving ...	1	Umbrella Maker ...	1
Gut Scraper ...	1	Upholsterer ...	1
Hide & Skin Mart ...	2	Varnish Making ...	1
Jeweller ...	7	Venetian Blind Making	1
Lace Mending ...	1	Watch Repairing ...	1
Laundries ...	7	Wheelwright ...	4
Locksmith ...	1		
Manufacturing Chemist	1		
Millinery ...	25	Total ...	403

The following tabulation is in accordance with the form supplied by the Home Office, and gives details of various matters which do not call for further comment, beyond the fact that the number of visits made by inspectors is smaller than in previous years, owing to this work being done by district inspectors, whose time was fully occupied by Smallpox duties:—

Factories, Workshops, Laundries, Workplaces, and Homework.

1.—INSPECTIONS.

Premises.	Number of	
	Inspections.	Written Notices.
Factories (including Factory Laundries) ...	8	3
Workshops (including Workshop Laundries)	675	27
Homeworkers' Premises	130	7
Total	813	37

2.—DEFECTS FOUND.

Particulars.	Number of Defects.	
	Found.	Remedied.
<i>Nuisances under the Public Health Acts—</i>		
Want of cleanliness	28	28
Want of Ventilation	2	1
Other nuisances	21	16
Sanitary accommodations { Insufficient	5	2
{ Unsuitable or defective	7	1
<i>Offences under the Factory and Workshop Act—</i>		
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	74	72
Total	137	120

3.—OTHER MATTERS.

Class.	Number of	
Homework—		
Lists of Outworkers received	68	708
Addresses of Outworkers—		
Forwarded to other Authorities ...	32	
Received from other Authorities ...	17	
	Wearing Apparel.	Other.
Cases of infectious disease notified in homeworkers' premises	1	1
Workshops on the Register (S. 131) at the end of 1904—		
Bakehouses	156	
Dressmaking	81	
Tailoring	33	
Cabinet Maker	12	
Shoe Maker... ..	14	
Millinery	25	
Others	82	
Total number of workshops on Register ...	403	

Further details respecting the inspection of places where home work is done, and places where women are employed, are given in the report of the woman inspector, on page 61.

BAKEHOUSES.—552 visits have been made to bakehouses to see that the conditions of the Factories and Workshops Act relating to such places were properly observed. Eighty-six notices were served to remedy defects, and these were principally for lime washing, repairing flues, cleansing, and for providing damp-courses. There is only one under-ground bakehouse in the Borough.

Work of Woman Inspector and Nurses.—The arrangement, to which I made reference in my last report, of having two nurses to assist Miss Fitzgerald in the visitation of homes where there was a young baby, and to follow up the phthisis cases, has been continued during the year with satisfactory results. The work of the woman inspector does not get lighter, and the question of additional assistance is worthy of your consideration. I need not advance any further arguments in support of such a suggestion, other than the record and scope of work which is contained in the following report which has been prepared for me by Miss Fitzgerald:—

“In accordance with your request, I make the following report upon the visits paid by the woman Sanitary Inspector during the year 1904; also upon the visits paid by the two trained nurses from the Royal Derbyshire Nursing Institution, who were engaged in work for the Health Department on two afternoons a week each throughout the year:—

Woman Inspector's Visits:—

	Births.	Infant Deaths.	Special Visits.	School Notific't's	Work-shops.	Out-workers.	Total.
January...	333	22	29	6	2	—	392
February	330	24	33	11	—	—	398
March ...	342	23	9	17	11	28	430
April ...	310	19	17	11	—	43	400
May ...	304	12	16	5	7	18	362
June ...	380	20	15	15	—	29	459
July ...	315	13	24	42	—	40	434
August ...	176	43	12	—	—	—	231
September	426	46	23	3	1	10	509
October ...	299	19	27	4	—	53	402
November	221	9	16	11	1	8	266
December	303	19	11	3	—	2	338
	3739	269	232	128	22	231	4621

Of these 4,621 visits

513 visits were 2nd visits on account of non-admittance on 1st visit.

160	„	„	3rd	„	„	„	2nd	„
49	„	„	4th	„	„	„	3rd	„
18	„	„	5th	„	„	„	4th	„
4	„	„	6th	„	„	„	5th	„
2	„	„	7th	„	„	„	6th	„
1	„	„	8th	„	„	„	6th	„

“Special” visits include visits *re* disinfection after phthisis, visits in respect of complaints received, and of notices served. Repeated visits to homes where the conditions were exceptionally unsatisfactory are also included under this heading. Owing to

pressure of other work, it has not been possible to do as much in this direction as is desirable; *frequent* periodical visiting is needed to bring these homes up to even a moderate standard as regards health and decency.

In the course of the year's work 43 nuisances were found.

Dirty Houses	...	...	...	...	...	...	10
Accumulation of stable manure near dwelling-house							1
Nuisance caused by fish refuse (from fried fish shop)							
in dustbins	...	...	...	...	...	...	1

In these 12 cases notices to abate the nuisance were served; 10 of which were complied with before the end of the year. The remaining 31 nuisances relating to drainage, sanitary accommodation, or of a structural nature, were reported to the District Inspectors.

In visiting the homes, by far the greater number of defects discovered of a nature prejudicial to health do not admit of tabulation; such for instance, to mention only a few, as omission to open bedroom windows in the morning, uncleanly bedding, dirty floors, closets not kept clean, and the placing of animal and vegetable refuse in dustbins. These are all pointed out when observed, and remedies and improvements suggested; but it is not possible, except in the more flagrant instances, to return and see that they have been carried out.

Out-workers.—The systematic inspection of out-workers' premises was begun in 1904. Secs. 107-115, Factory and Workshops Act (1901), contain provisions intended to prevent the employment of out-workers in places injurious or dangerous to health. The employer is made responsible, under certain circumstances, for the condition of the places in which his out-workers carry on their work. Somewhat similar provisions, designed for the protection rather of the general public than of the work people, regulate the giving out of certain classes of work to houses in which there is infectious disease.

The reason for the regulation and control of home work becomes apparent in view of the increasing stringency of the regulation of work within the factory and workshop. Were there no regulation of home work, the tendency would be, in the unskilled and poorly-paid industries, to direct the stream of work away from the regulated, inspected factory or workshop into the unregulated, uninspected home. It is significant that the out-

worker first had a legal existence in the Factory Act of 1891, which followed upon the report of the Committee of the House of Lords on "Sweating," issued in 1890. The Factory Act of 1901 placed the out-workers' premises under the supervision of the District Council. In certain trades, to be specified by the Home Secretary, the employers must send twice a year, on or before the 1st of February and the 1st of August, to the District Council the lists of out-workers employed by them. The trades that have been specified by the Home Secretary up to the present time are:—

- (a) The making, cleaning, washing, altering, ornamenting, finishing, and repairing of wearing apparel, and any work incidental thereto;
- (b) Making, ornamenting, and finishing of lace and lace curtains and nets;
- (c) Cabinet and furniture making and upholstery work;
- (d) Making of electro-plate;
- (e) Making of files;
- (f) Fur-pulling;
- (g) The making of iron and steel cables and chains;
- (h) The making of iron and steel anchors and grapnels;
- (i) The making of cart-gear, including swivels, rings, loops, gear buckles, mullin bits, hooks, and attachments of all kinds;
- (j) The making of locks, latches, and keys.

The principle underlying this selection of industries is not apparent, nor why all trades capable of being carried on within the home, are not scheduled. The lists of out-workers received from employers in the Borough fall under the following headings as regards trade:—

Tailoring	...	...	...	...	...	230
Hosiery	...	...	...	...	...	25
Net-mending		...	...	...	...	433
Chevening	...	...	...	...	...	20

231 visits were paid to out-workers' premises, and 130 inspections were made; the discrepancy being accounted for by the fact that a visit is often paid when the out-worker is gone to the fac-

tory to take back and fetch work; also to the fact that the addresses received are not always up to date nor invariably correct. In addition to hindrances of this nature, sorting and comparing the half-yearly lists received from the employers entails a very great amount of clerical work.

The visits distributed among the different trades are as follows:—

Tailoring	...	...	...	...	...	16
Hosiery	...	...	...	...	...	6
Net-mending	...	...	...	...	...	108

Out-workers in the tailoring and hosiery trades being without work during the greater part of the year, owing to depression in trade, it was considered best to devote the time to the inspection of net-menders' premises, who had plenty of work. The 108 visited may be classified as follows, as regards the interior conditions of the home:—

Clean and entirely satisfactory.	Fairly Clean.	Dirty.
75	27	5

In two instances, notices to cleanse and limewash were served on the owners, and complied with; and where the tenants were themselves in fault they were warned that the District Council had power to prohibit work from being done in unwholesome premises, and they were noted as requiring periodical inspection. Eight defects of a structural nature were reported to the District Inspectors. No overcrowding was discovered, nor were any domestic workshops reported to H.M. Inspector.

In only a few instances did the earnings of the out-worker form any considerable proportion of the total family income; these were widows or unmarried daughters living and working at home. The majority of the net-menders visited were the wives of labourers, and of the less-skilled workmen, who utilised what leisure they had to earn a few shillings a week, often only 2s. 6d. or 3s., to supplement their husband's earnings. A great number volunteered the information that they did the work to help a little with the rent. In view of this, the following table may be of interest:—

72 lived in houses of 6 rooms (and over)			
24	„	„	5 „
7	„	„	4 „
2	„	„	3 „
3	„	„	2 „

It would seem justifiable to assume that in these cases the wife's earnings have made it possible for the family to inhabit a more commodious house than would otherwise have been possible, and also to secure sufficient bedroom accommodation—matters bearing very considerably on health and decency.

From what has been said, it will be gathered that the out-workers' premises (so far as they have been inspected) are, on the whole, in a satisfactory condition. It must, however, be remembered that the information obtained has, so far, been confined to one trade, and that net-mending is not typical of home-work, as a whole. It is essentially a "light industry," it is moderately skilled, it creates no dust nor causes debris; also the actual value of a piece of work taken out at any one time prevents it from going to homes of the disreputable class.

Health Lectures.—In addition to the inspectorial work, 15 lectures were given in the course of the year; they were as follows:—

1 Lecture to a Mothers' Meeting on "Health in the Home."

Course of 3 Lectures to a Mothers' Meeting on "Health in the Home" and "Care of Infants."

Course of 5 Lectures to a Mothers' Meeting on "Health in the Home" and "Care of Infants."

Course of 4 Lectures to a Factory Girls' Club on "Home Hygiene."

1 Lecture at Girls' High School on the "Elements of Hygiene"

1 Lecture to Women's Co-operative Guild on "Industrial Law."

As requests for lectures continued to be received both from Mothers' Meetings and Girls' Clubs, the following syllabuses were drawn up and printed, by order of the Sanitary Committee, at the end of the year. Syllabus A. is intended for women, syllabus B. for girls; both are arranged for courses of from three to five lectures, according to length:—

SYLLABUS A.

(Approved by the Sanitary Committee).

HEALTH.—Its importance and how to secure it in the home.

THE HOUSE.—Influence of light and sunshine; curtains; furniture; rubbish.

CLEANSING.—Dangers of dust and dirt; wise and unwise methods of cleansing; proper care of the yard, drains, sink, closet, and refuse bin.

THE STORING OF FOOD.—Precautions against contamination.

VENTILATION.—Why fresh air is needed; the meaning of a “stuffy smell” in a room; ill effects of breathing foul air; how to ventilate by day and night; ventilating under difficulties; night-air.

PERSONAL CLEANLINESS.—Why needed and how to secure; effects on health of want of cleanliness; clean clothing; baths.

THE CARE OF INFANTS.—Why so many babies die before they are a year old; how to prevent this.

NATURAL FEEDING.—Its advantages; the danger of suckling too often and of giving the baby bread, rusks, or biscuits as well as the mother's milk; what to do if the mother has not enough milk; cleansing the baby's mouth; weaning; a suckling mother's own food.

HAND-FEEDING.—Its risks; why the baby must have *nothing but milk* for first six months; patent foods, corn flour, arrowroot, etc.—when these may be used; how to scald and store the milk; how to prepare it at birth and as the child grows older, how much to give at each meal and how many meals in a day; how to make barley-water; condensed milk—why it should not be used; a bad feeding-bottle and a good feeding-bottle shewn and explained. Thrush; diarrhœa; convulsions.

CLOTHING.—Wise and unwise; why flannelette is not flannel; effects of exposing a child at doors and entries when insufficiently clad; bronchitis.

SOOTHING SYRUPS, DRUGS, ALCOHOL.—Dangers of.

Why the baby must have a cot to itself; how to make a cheap and cosy one.

OLDER CHILDREN.—How to give them nourishing food at a low cost; clothing.

INFECTIOUS AND CONTAGIOUS AILMENTS OF CHILDREN.—Measles, whooping cough, ringworm, impetigo, etc.; dangers; treatment; precautions.

SYLLABUS B.

(Approved by the Sanitary Committee).

- INTRODUCTORY REMARKS.—Home-making as an art and its importance in national life.
- HEALTHY CONDITIONS A NECESSITY IN THE HOME.—The laws of health must be learned; consequences, to self and others, of ignorance of these laws.
- THE HOUSE AND ITS SURROUNDINGS.—How to choose a house; why damp and dark houses are bad; influence of light and sunshine in the house.
- CLEANSING.—Whether easy or difficult will depend on the furnishing; how this should be done sensibly with cleansing in view; wise and unwise methods of cleansing; care of yards, drains, closets, refuse bins.
- INVISIBLE DIRT.—(a) The air of our rooms; what takes place when people breathe; how the body gets rid of impurities by means of the blood and the lungs (diagram); the true meaning of a “stuffy smell” in a room; effects on health of breathing foul air; how to get rid of bad air; how to ventilate rooms by day and night without draughts (demonstration). (b) How the body gets rid of impurities through the pores of the skin; (1) effects on surface of the body; (2) clothing; (3) bed clothes; proper management of these three.
- THE USE OF CLOTHES.—Foolish clothing; sensible clothing; clothing and occupation.
- THE FEEDING AND CLOTHING OF INFANTS.—A brief account of the baby’s digestive powers and the size of its stomach, showing need for great care in feeding. What to do if the baby cannot have its natural food; reasons for adding water to cow’s milk—comparison of calf and baby; how to scald, store and prepare the milk; dangers of sour milk and contaminated milk; sources of contamination; why a baby must not have “starchy” foods (bread, cornflour, patent foods, etc.) before it has cut some teeth; condensed milk—reasons for avoiding it.
Demonstration—Good and Bad Feeding Bottles.
- CLOTHING.—Common mistakes that should not be made; why a baby feels cold sooner than a grown person; illnesses caused by exposure.

After a course of lectures on syllabus B., the girls are asked to reply, in writing, to a few examination questions. A copy of an examination paper is appended; the questions are purposely made as simple and as informal as possible. The answers received are sufficiently satisfactory to demonstrate that the girls assimilate and understand, at any rate the greater part of what they are told:—

HOME HYGIENE.

1. Write all you know about the air in our rooms; explain why it is made bad by people breathing, and say how best to keep it always fresh.
2. What ought we to do to the bed clothes every morning after getting up? Say why this should be done.
3. Write what you can remember about "sensible clothes."
4. Why are damp and dark houses bad to live in? What ought you to think about specially in choosing a house?
5. How would you furnish a house so that it may be easy to clean it?
6. How should cleaning be done so as not to scatter dust about?
7. What should you do with milk that is kept in the house, to keep it from going bad?
8. Write what you can remember about the proper food for a baby before it has cut some teeth.
9. Why is it wrong to use a feeding-bottle with a long india-rubber tube?
10. Can you remember anything that you were told about consumption, and what made people likely to get it?

Visits paid by Nurses.

Visits of instruction to mothers re infant feed-				
ing and management	...	...	...	879
School notifications	...	...	...	197
Visits to phthisical patients in their homes	...			681
				<hr/>
Total				1757

During the year 218 infants out of the total number visited after registration of birth were considered to be in need of further visitation; these were entered in the Nurse's Visiting Register, and received 879 visits. Some required only one or two visits from the nurse; some as many as she could find time for. The reasons for repeated visiting were: the weakly condition of the infants, neglect, improper feeding, including food wrong in kind, and food right in kind and incorrectly prepared, desire for instruction and advice on the mothers' part, or any combination of these reasons. As was stated in the Annual Report for last year, it is most encouraging to note that on the part of the younger mothers there is a very genuine desire for instruction in the matter of the rearing of their infants, and the visits of the

woman Inspector, and of the nurse, are, in many cases, anxiously waited for and warmly welcomed.

In visiting cases of minor infectious diseases notified by the elementary schools, the nurse points out the dangerous nature of measles and whooping cough, advises calling in a medical man in serious cases, leaves a paper describing the precautions to be taken, and tries to persuade the mothers to keep convalescent children apart from neighbours' children. In view of the great ignorance which prevails on the subject of measles, it is very essential not only that the case should be notified from the school as soon as possible, but that the visit should also be paid early. It is quite usual to find a child playing out of doors in cold weather the day after the disappearance of the rash. Remonstrance is then useless; for a visit to be effectual it should be paid when the rash is out, and the mother then informed that danger will not be over with the disappearance of the rash. When cases of ringworm and impetigo are reported from the schools, they are also visited by the nurse, who gives instruction as to the most effectual methods of treatment, in order that the period of absence from school may be made as short as possible. The nurse has continued the systematic visitation of phthisical patients, begun at the end of 1903. At the beginning of the year, 64 names were on the register, and 101 names were added during the year. These received 681 visits, the number of visits paid in each case depending upon the measure of precautions taken. Some were found on the first visit to be taking every precaution, others caused a good deal of difficulty, and required visiting at least once a month. The nurse directs special attention to the need for care in the disposal of sputum, for wet-cleansing and damp-dusting, for special cleansing of the house in the later stages, for separate sleeping accommodation, and for open windows. She states that the last two items give her most trouble. In both, poverty operates, and in the former, ignorance and indifference as well. If the patient has a separate room at all it is in most cases the back bedroom of a six-roomed house. This room is small, generally it has no fireplace, and is ventilated only by a casement window. The bed must of necessity be near this window, and when, in addition, blankets are but thin and scanty, the open window is endured with a great deal of discomfort. In these cases it is the nurse's part to point out to the person in charge that a simple improvised screen to keep off the draught,

and a hot water bottle or even hot bricks to the feet, will make a very great difference in the patient's comfort. In smaller houses the patient can, as a rule, have only a separate bed in a room shared by others; and even this is not always possible. The precautions as to wet cleansing seem to be fairly well carried out, and a large number of patients accept the loan of a spitting-cup or a Dettweiler flask. All removals are reported by the nurse to the woman Inspector, who arranges for disinfection or wet cleansing of the premises quitted. Disinfection is offered, or wet cleansing insisted upon, so far as is possible, after all phthisis deaths.

Offensive Trades.—The following are the principal offensive trades in the Borough:—

Bone Boiling	...	1	Soap Boiling	...	1
Gut Scraping	...	1	Tallow Melting	...	2
Hide & Skin Mart		2	Tripe Boiling	...	4
Leather Dressing		1	Varnish Making	...	1
Leather Tanning	...	1			—
Parchment Works		1			
Skin Curing	...	1	Total	...	16

These places have been regularly visited, and in three instances it has been necessary to serve notices, viz., to abate nuisance from soap boiling, to remove bones at sufficiently frequent intervals to prevent any nuisance arising, and to linewash premises.

General Inspectorial Work.—The supervision of Common Lodging-houses and tenement houses has been efficiently performed. The total number of visits made by the Special Inspector with this object in view are set out in the details supplied to me by the Chief Inspector, as are also the details as to infringements of the bye-laws, or sanitary defects which were discovered, and the results of action taken to remedy such. There has not been discovered any instance of an overerowed Common Lodging-house, and I am of opinion that the number of private houses which I reported last year as being to all intents and purposes common lodging-houses, has decreased. 354 visits were made to places where ice cream was prepared for sale, and various defects were discovered. These, however, were of a minor character, and were soon remedied. Over six thousand visits were paid to the 76 registered slaughter-houses; but with this amount of visiting,

only a portion of the slaughtered animals are seen, and this constitutes, perhaps, the main argument in favour of a central slaughtering-place, as opposed to the numerous scattered private slaughter-houses.

As in previous years, a large amount of food was destroyed, the great bulk of which was voluntarily tendered.

1,385 visits have been made to dairies, cowsheds, and milk shops, and the places in the town as a result of this inspection are, on the whole, satisfactory. In dealing with an outbreak of enteric fever and scarlet fever, it was found that although the address of the retailers could readily be obtained, the address of the original distributor was difficult to discover without special enquires. The Inspector who has charge of this work has done much during the past year to remedy this deficiency by preparing a list showing the relationship between the large distributors and the small retailers; any association between outbreaks of these diseases and the milk supply is thus more easily ascertainable.

Water Supply.—During the year the water supply of the Borough has been frequently submitted to analysis, and it has not been found necessary to criticise the quality of the water supplied. A few wells have been closed in the Alvaston area, and a corresponding number of houses were supplied direct from the town's mains.

Meteorological Records.—I have to thank Mr. W. G. Caint, Secretary-Superintendent of the Derbyshire Royal Infirmary, for the information from which the subjoined table has been compiled. The highest mean shade temperatures were registered during the month of July. The greatest variation between the maximum and minimum temperatures was observed during the months of June and July. February was the coldest month, during which month also most rain fell. The greatest number of rainy days was observed in February and December. The heaviest amount of rainfall in twenty-four hours was on 17th August, when .92 inches was registered. The nearest approach to this was on the 25th July, with .8, and 3rd February with .6.

Table X.—Shewing the means of the Meteorological observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1904:—

1904.	THERMOMETERS.				Rainfall in inches.		Greatest fall in 24 hours.		No. of Rainy days, 1904.
	Dry Bulb.	Wet Bulb.	Shade Temperature.		Infirmary Grounds 1904.	1903.	Amount in inches.	Date.	
			Maxi-mum.	Mini-mum.					
January ...	39·2	38·4	44·6	33·9	2·17	2·07	·32	31st.	18
February...	37·3	35·8	42·3	33·3	3·01	1·26	·65	3rd.	20
March ..	39·7	34·5	46·3	33·9	1·69	3·51	·40	7th.	19
April ...	49·5	45·8	55·6	41·7	1·96	1·89	·48	14th.	18
May ...	53·2	49·1	59·8	45·0	1·98	3·68	·48	6th.	18
June ...	58·2	53·2	65·3	48·5	·59	1·29	·30	24th.	8
July ...	64·4	58·9	72·8	54·7	2·08	2·26	·82	25th.	13
August ..	61·5	59·2	68·5	51·8	2·77	4·88	·92	17th.	15
September	55·5	52·2	63·0	47·3	1·85	2·80	·61	30th.	9
October ...	48·7	46·9	56·0	42·4	·67	5·59	·37	16th.	12
November	40·1	38·8	46·5	34·9	1·42	2·14	·30	10th.	15
December	38·0	36·8	42·5	34·0	1·66	1·25	·26	9th.	20

SANITARY INSPECTOR'S REPORT, 1904.

Ford Street Stables.

Number of Horses at last report	...	72	
Bought during the year	...	7	
		—	79
Disposed of	...	6	
Surveyor's Horses sent to Nottingham			
Road Stables	...	5	
		—	11
Horses remaining at Ford Street	...	68	
Inspector's Department	...	41	
Surveyor's Department	...	22	
Police and Fire	...	5	

Privy and Ashpit Cleansing.

Night-work.—Privies Cleansed	...	7,289
„ Ashpits cleansed	...	4,124
„ Privy Cesspools cleansed	...	731
Day-work.—Dry Ashpits cleansed	...	749
		12,893

Refuse Collected.

Night-work.—Loads (Excreta only)	...	6,173
„ „ Ashes and Excreta	...	4,018
„ „ Ashes only	...	3,351
Day-work.— „ Ashes	...	23,747
		37,289

Refuse Disposal.

Disposed of as Manure 9,345 tons 18 cwts. 2 qrs.
 By Boats 495 loads.
 By Customers' own Carts 545 tons 9 cwts.

Delivered to Farmers from pits 3,586 cart loads.

Deposited on tips 982 cart loads.

Burned in the Destructors 28,068 tons.

Incombustible material from night refuse 243 tons 9 cwts. 2 qrs.

Day ashes and trade refuse 25,870 tons 8 cwts. 2 qrs.

Extracted from refuse and sold 15 tons 0 cwts. 2 qrs. Scrap Iron, and 210 lbs. Solder.

Workshop Bakehouses.

Bakehouses in use at end of 1903	...	...	101
Old houses re-opened	...	...	12
New houses opened	...	...	2
			<hr/> 115
Bakehouses closed in 1904	...	...	5
Bakehouse converted to factory	...	...	1
			<hr/>
In use at end of 1904	...	...	109
Empty Bakehouses	...	...	47
			<hr/>
Total number of Bakehouses in the Borough...			156
			<hr/>
Visits made to Bakehouses	...	...	552
Notices served	...	...	86
Defects remedied	...	...	87

Owing to the erection of machinery, one bakehouse was converted into a factory, and has been struck off the list; and in another case the premises were extended by the erection of an additional mixing room and new patent oven.

Canal Boats.

Annual Report for the year 1904, in accordance with Section 3, Canal Boats Act, 1884.

1. Inspector and Salary, Chief Inspector and Assistant. No salary allocated.

Address: Sanitary Inspector's Office, Ford Street, Derby.

2. Boats inspected, 80. Visits to Canal, 69.

3. Infringements of Acts and Regulations, 9.

<i>a.</i> —Registration ...	0	<i>i.</i> —Painting ...	2
<i>b.</i> —Change of Master ...	0	<i>j.</i> —Provision of Water Cask	2
<i>c.</i> —No Certificate on board	2	<i>k.</i> —Removal of Bilge Water	0
<i>d.</i> —Absence of Marking ...	0	<i>l.</i> —Notification of Infectious	
<i>e.</i> —Overcrowding ...	1	Diseases ...	
<i>f.</i> —Separation of sexes ...	0	<i>m.</i> —Admittance of Inspector	0
<i>g.</i> —Cleanliness ...	0	<i>n.</i> —Boats found in bad	
<i>h.</i> —Ventilation ...	0	repair ...	2

4. Legal proceedings taken, none.
5. Other steps taken, 5 caution forms served and several letters written.
6. Cases of infectious diseases dealt with, none.
7. Detention of boats for cleansing and disinfection, none.
8. Number of boats on Derby register at end of year 1904, 32.
9. Number registered during 1904, none.
10. During the year 15 boats have, for various reasons, been removed from the register, they being no longer used as dwellings.

Common Lodging Houses.

The large influx of labourers in connection with the new sewage and tramways works resulted in several applications for registration being made. Seven houses were inspected, but only six were found suitable for the purpose, and these, after the necessary improvements and alterations had been made, were registered. By this means accommodation for 153 more lodgers was provided, and to this number must be added 55 beds resulting from the extension, by the addition of another storey, of an already registered house, and 27 beds consequent on the re-arrangement and re-measurement of the rooms of two other houses. The total increased accommodation thus provided during the year was therefore equal to 235 beds; but against this must be set the loss occasioned by the demolition of two houses in Bold Lane, and the closing of another on the Mansfield Road. Herewith appended are particulars relating to the accommodation provided:—

Houses in use at end of 1903—16,	providing accommodation for
	589 adults & 8 children
„ registered during 1904—6,	„ for 139 adults and
	14 children

Additional beds added by extensions,

&c, providing accommodation for 82 adults

Houses demolished during 1904—2, which provided accommodation
for 65 adults and 1 child

„ closed „ „ —1, „ „ for 26 adults and
3 children

„ in use at end of 1904—19, providing accommodation for
719 adults & 18 children

Net increase in houses 3

„ „ accommodation, 130 adults and 10 children.

One large house has been transferred from one keeper to another, and a very great improvement has been effected by the removal of a large number of stuffy dark cubicles; the rooms being now thrown open, securing better light, ventilation, and cleanliness.

One unregistered person was found keeping premises without the same being registered, but as the premises were unsuitable, a caution was sufficient to secure the immediate closing thereof, resulting in the registration of the applicant and a more suitable building. Several other cases were enquired into as to the usage of private houses as common lodging-houses, but sufficient evidence to prove this was not obtained.

Eight outbreaks of Smallpox have occurred during the year, affecting six houses.

Applications for registration or 1905 have been made by all the present keepers, and granted in each case. 2,313 visits have been paid to the houses during the year—almost daily visits, including Sundays, being made during the prevalence of Smallpox.

135 notices, written or verbal, have been given to remedy defects or infringements of the Bye-laws, resulting in the removal of 157 causes of complaint.

Contagious Diseases Animals Acts.

The year 1904 has passed without a single outbreak of Swine Fever, and other diseases have also been conspicuous by their absence.

Weekly inspection, and cleansing and disinfection of pig dealers' premises has been made, and attendance at the Cattle Market on each market day maintained.

An Order has been issued by the Board of Agriculture and Fisheries relating to importation of fat swine from Ireland, which will entail the issue of licenses for and supervision of slaughter of all such animals brought into the Borough. The Order comes into force on 21st January, 1905.

Dairies, Cowsheds, and Milkshops.

Dairymen and Purveyors within the Borough:—

On Register at end of 1903	...	...	351
Registered during 1904	...	...	91
			<hr/>
			442
Struck off Register	...	...	102
			<hr/>
On Register at end of 1904	...	...	<u>340</u>

Cowkeepers within the Borough:—

On Register at end of 1903	...	...	28
Registered during 1904	...	...	5
			<hr/>
			33
Removed from Register	...	...	5
			<hr/>
On Register at end of 1904	...	...	<u>28</u>

Nine legal notices were served during the year to compel registration, and, as a result, seven persons were registered, one gave up his tenancy of the milkshop, and the other decided to give up the sale of milk altogether. In addition to the above legal notices, 165 written or verbal cautions have been given respecting infringements of the Regulations or Orders, and 164 of these have been complied with.

1,385 visits of inspection have been made to the various dairies, cowsheds, and milkshops.

Purveyors resident out of the Borough.

Special attention has been paid during the year to this branch of work, and as a result 38 farmers who bring milk into the Borough have been registered. Several of these are on farms previously occupied by registered purveyors, but the majority are entirely new registrations.

Seventeen farmers have been struck off the register owing to having left their farms or given up sending milk into this Borough.

Forty legal notices to register have been served during the year, securing 35 registrations. Four were returned undelivered through the post, and one farmer had ceased to send milk into this Borough prior to receiving the notice. Of the four undelivered notices, it was found that in three instances mistakes had been made in the names submitted to the Inspector, which, when rectified, proved to be the names of three farmers already registered as purveyors. In the remaining case, the purveyor has not yet been traced. With a view to revising the list of purveyors registered prior to 1904, fifty reply post-cards were sent to those farmers whose present tenancy of the farms and sale of milk in the Borough was doubtful. Thirty replies have been received so far, and three could not be found, the farms being vacant, resulting in 15 names being struck off the register, and two fresh ones added. The following is a brief summary:—

Purveyors on Register at end of 1903	...	...	121
Registered during 1904	...	...	38
			<hr/>
			159
Removed during the year	...	...	17
			<hr/>
On Register at end of 1904	...	...	142
			<hr/>

NUISANCES

NOTICES SERVED.

						A	B	C	X	Total.
Ashpits	...	To Demolish	...	...	...	1	4	...	..	5
		„ Repair	...	...	...	...	...	...	...	...
Drains	...	„ Cleanse and repair (or Soil Pipes)	...	...	...	33	98	50	...	181
		„ Disconnect from Sinks	...	...	...	1	2	..	...	3
		„ Provide (or Soil Pipes)	...	...	...	...	3	6	...	9
		„ Re-lay Defective	...	...	...	68	53	41	...	162
		„ Remove from inside Houses	...	...	...	...	1	1	...	2
		„ Remove Soil Pipes from inside Houses	...	...	...	...	...	..	...	...
		„ Replace Brick by Salt-glazed E.S. Pipes	...	...	...	...	4	...	...	4
		„ Trap Inlets and provide or repair Inspection Chambers	...	...	...	2	6	1	..	9
		„ Ventilate Soil Pipes and Drains..	...	...	...	...	...	...	..	...
		„ Unstop, Repair, Renew, &c., Waste Pipes	...	...	...	1	3	...	...	4
Houses	...	„ Cleanse	...	...	...	8	19	11	...	38
		„ „ and limewash Cellars	...	...	...	3	...	...	...	3
		„ Damp course and make dry	...	...	...	...	4	2	...	6
		„ Prevent Overcrowding	...	...	...	...	3	1	...	4
		„ Provide Ash Bins	...	...	...	3	21	3	..	27
		„ Repair Cellar Coverings	...	...	...	...	...	...	...	...
		„ „ Dangerous walls or Buildings	...	...	...	...	...	...	...	...
		„ „ Paving Yards or Passages	...	...	...	4	14	3	...	21
		„ „ Roofs, Floors, &c.	...	...	...	1	10	6	...	17
		„ „ Disconnect or Provide Spouting	...	...	...	4	32	13	...	49
		„ Ventilate Rooms	...	...	...	...	...	...	...	...
Privies	...	„ Cleanse and Repair, or Provide New Tubs	...	...	...	31	14	16	...	61
		„ Convert to W.C.'s	...	...	...	96	70	84	...	250
		„ Demolish	...	...	...	..	...	3	...	3
Urinals	...	„ Erect	...	...	...	...	...	...	...	...
		„ Remove	...	...	...	...	...	...	...	...
		„ Repair	...	...	...	...	1	...	...	1
Water	...	„ Cleanse and Repair Foul Soft Water Tanks and Pumps	...	...	...	2	6	8	...	16
		„ Fill in Disused Wells	...	...	...	...	6	8	...	14
		„ Provide with Town Water	...	...	...	...	...	10	...	10
		„ Repair Covers of Tanks or Wells...	...	...	...	...	1	..	...	1
W.C.'s	...	„ Cleanse and Repair	...	...	...	1	5	11	...	17
		„ Lay on Flushing Water	...	...	...	2	...	...	..	2
		„ Provide additional	...	...	...	...	2	9	...	11
Carried forward						261	382	287	...	930

DEALT WITH.

NUISANCES ABATED.

		A	B	C	X	Total.
Ashpits ...	Demolished	58	38	138	1	235
	Repaired ... ..	...	2	...	..	2
Drains ...	Cleansed and Repaired (or Soil Pipes)	122	253	82	2	459
	Disconnected from Sinks	3	2	20	1	26
	Provided (or Soil Pipes)	168	...	395	8	571
	Re-laid and New	218	373	359	6	956
	Removed from Inside Houses ...	7	30	18	2	57
	Soil Pipes Removed from Inside Houses	3	3	5	...	11
	Brick Replaced by Salt-glazed E.S. Pipes	8	53	69	...	130
	Inlets Trapped and Inspection Chambers Provided or Repaired ...	608	352	906	3	1869
	Soil Pipes and Drains Ventilated ...	118	50	224	2	394
	Waste Pipes, Unstopped, Repaired, &c.	88	4	16	1	109
Houses ...	Cleansed	5	14	9	...	28
	Cellars Cleansed and Limewashed ...	4	35	11	...	50
	Damp Coursed and made Dry ...	1	...	2	1	4
	Overcrowding Prevented ... ..	...	4	1	...	5
	Ash Bins provided	115	45	233	3	396
	Cellar Coverings Repaired ... ..	...	...	3	...	3
	Dangerous Walls or Buildings Repaired	...	...	11	...	11
	Paving of Yards and Passages ,,	163	13	104	2	282
	Roofs, Floors, &c.	2	12	13	8	35
	Sponting Repaired, Disconnected or Provided	74	112	71	3	260
	Rooms Ventilated ... ..	...	...	...	6	6
Privies ...	Cleansed and Repaired, or new Tubs Provided ... ..	...	11	2	...	13
	Converted to W.C.'s	147	121	105	3	376
	Demolished ... ..	...	8	133	...	141
Urinals ...	Erected ... ..	...	3	4	...	7
	Removed	1	4	...	...	5
	Repaired ... ..	..	2	...	...	2
Water ...	Soft Water Tanks and Pumps Cleansed and Repaired	29	30	58	..	117
	Disused Wells Filled in	8	12	25	...	45
	Provided with Town Water ... ..	...	..	40	..	40
	Covers of Tanks or Wells Repaired ...	10	...	3	...	13
W.C.'s ...	Cleansed and Repaired	17	29	14	.	60
	Flushing Water Laid on ... ..	...	1	5	...	6
	Additional Provided ... ..	...	3	12	4	19
	Fittings Repaired	9	28	24	3	64
	Carried forward	1986	1647	3115	59	6807

NUISANCES

NOTICES SERVED.

	A	B	C	X	Total.
Brought forward	261	382	287	...	930
W.C.'s ... To Repair Fittings	3	6	5	...	14
„ „ Ventilate ... ..	...	...	...	...	...
For Bakehouses ... ..	...	...	...	86	86
„ Common Lodging-houses ... ..	...	...	...	135	135
„ Dairies, Cowsheds, and Milkshops ... ..	...	...	...	165	165
„ Factories and Workshops	9	9	2	...	20
„ Houses Let in Lodgings ... ..	...	...	...	130	130
„ Smoke Nuisances ... ..	...	1	...	...	1
To Remove Accumulations of Manure, &c., and Cleanse Premises ... ..	...	14	9	...	23
„ „ Fowls or Animals	2	9	11	...	22
„ „ Manure Pits or Cesspools ... ..	...	1	...	...	1
„ „ Stagnant Water ... ..	...	2	...	...	2
„ Cleanse Ice Cream Premises ... ..	...	...	...	25	25
Offensive Trades, to Limewash, &c. ... ..	...	1	...	2	3
Stables—To Drain or Pave	1	2	...	...	3
	276	427	314	543	1560

DEALT WITH—continued.

NUISANCES ABATED.

	A	B	C	X	Total.
Brought forward	1986	1647	3115	59	6807
W.C.'s ... Ventilated ... ..	...	..	14	...	14
Bakehouses, Contraventions Remedied	...	...	...	87	87
Common Lodging-house ,, ,:	...	...	...	101	101
Dairies, Cowsheds, and Milkshops, Contraventions Remedied ... ..	...		...	164	164
Factories and Workshops, Contraventions Remedied	19	13	...	...	32
Houses Let in Lodgings, Contraventions Remedied	...	..	...	127	127
Smoke Nuisances abated ... ..	...	1	...	...	1
Accumulations of Manure, &c., Removed and Premises Cleansed	1	19	11	...	31
Fowls or Animals Removed ... ..	...	5	10	1	16
Manure Pits or Cesspools ,,	2	8	2	...	12
Stagnant Water ,, ... ..	...	4	...	...	4
Ice Cream Premises Cleansed ... ..	...	...	...	26	26
Offensive Trades, Limewashing, &c. ... ..	...	1	...	2	3
Stables—Drained or Paved	3	13	2	...	18
	2011	1711	3154	567	7443

Houses Let in Lodgings.

Houses in use at 1st January, 1904	...	41
Further registrations during the year	...	8
		—
		49
Houses struck off the Register (3 of which were afterwards re-registered)	...	8
		—
Total in use at end of 1904...	...	41
		—

Applications made, for 5 other houses, were not proceeded with, owing to unsuitability of premises.

Special attention had to be given to prevent overcrowding of these houses, and as a result, two houses, in which the rooms were not large enough for the number of persons desired, were voluntarily closed by the owner, and in other instances the number of lodgers was reduced.

Two cases of Smallpox occurred during the year in two separate houses, but in neither case was there further spread of the disease.

Visits of inspection, 2,348.

Verbal and written notices, to the number of 130, secured the removal of an equal number of causes for complaint.

Ice Cream Premises.—Manufacturers and Retailers.

Number of places on the list at end of 1903...	146
„ struck off during 1904	... 70
„ added to list during 1904	... 183
„ remaining on list end of 1904	259

Notices to the number of 25 were served to remedy irregularities, chiefly arising from the making or storing ice cream in unsuitable places, and in each instance the notice was complied with.

Visits of inspection paid to premises, 354.

Police Court Proceedings.

No. of Cases	Offence.	Result.	Total Costs. £ s. d.
1	Exposing for sale 10 pieces of Unsound Beef	Fined £2 and Costs...	2 11 6
1	Selling Adulterated Milk ...	Fined 15s. and Costs	1 13 0
1	„ „ Brandy ...	Fined 5s. and Costs...	1 3 0
1	Being in possession of 127 pieces of Meat, which were diseased, unsound, unwholesome, and unfit for the food of man	Fined 1s. 6d. per piece and Costs...	11 0 0
1	Being in possession of 7 pieces of Meat which were unsound, unwholesome, and unfit for the food of man... ..		
1	Selling Adulterated Whiskey	Fined 5s. and Costs...	1 3 0
1	Exposing Infected Clothing ...	Fined £3 and Costs...	5 17 6
1	Failing to notify case of Infectious Disease	Fined 10s. and Costs	1 2 0
1	Exposing Child suffering from an Infectious Ailment in public conveyance	Fined 5s. and Costs...	1 14 6

Registered Slaughter-Houses.

At the end of the year 1904:—

In the hands of private holders	52
Corporation houses let to private tenants ...	15
„ „ used as public	4
Standing empty—private	1
„ „ Corporation	4

—
76
—

Visits of inspection for the year, 6,289.

Unsound Food.

CONDEMNED AND DESTROYED.

952 lbs. Apples ...	4,020 lbs. Mussels.
15 lbs. Beasts' Kidneys.	18 lbs. Mutton.
3,186 lbs. Beef.	2,478 lbs. Peas.
126 lbs. Broad Beans.	126 lbs. Plaice.
1 Calf, weight 50 lbs.	35 lbs. Pickles.
546 lbs. Cat Fish.	3 Pigs.
108 lbs. Cherries.	44 lbs. Pigs' Kidneys.
504 lbs. Cod Fish.	12 lbs. Pigs' Plucks.
224 lbs. Cockles.	24 lbs. Prawns.
84 lbs. Haddocks.	209½ couples of Rabbits.
19 Hares.	336 lbs. Shrimps.
896 lbs. Herrings.	90 lbs. Tomatoes.
45 lbs. Kippers and Bloaters.	55 lbs. Veal.
1,941 lbs. Liver, Lungs, etc.	628 lbs. Watercress.
1,008 lbs. Mackerel.	546 lbs. Witches.

One item worthy of mention in connection with the food supply has been the number of animals affected, more or less, with Tuberculosis, and much care and discretion has had to be exercised, in accordance with the Royal Commission's Report, in determining how much to condemn and how much to pass. Scrupulous care has been taken in every instance coming under notice, to see that all diseased parts or organs were condemned and destroyed, and in some instances the whole carcass had to be confiscated. There is, however, one item calling for special mention, which although seriously affecting town dwellers, is one to be remedied in the country. Out of 63 bovine animals slaughtered, and found affected, the large number of 56 were cows, which had at some time been milkers. This fact points to a need for reform in the country districts, particularly in the conditions under which milking cows are stalled, kept, and fed. The open air treatment is recognised as the best for persons suffering from tubercular disease, and the same generous treatment as to fresh air, good feeding, and sanitary surroundings, should be accorded to the animals in the country which are to produce our milk supplies, and which when unfit for this, possibly on account of failing health and approaching disease, are prepared for killing as human food, for the dwellers in our towns. May I be permitted to call the attention of our Government, butchers, and meat pur-

veyors to this point: that it would be infinitely safer, better, and cheaper to stop the supply of tuberculous animals than to pay compensation for their destruction in order to prevent injury to mankind.

Food and Drugs Acts.

Samples submitted to the Borough Analyst (Mr. Otto Hehner).

Samples.	Article.	Genuine.	Adulterated.
20	Beer	8	12
7	Brandy	6	1
20	Butter	20	...
3	Cheese	3	...
6	Gin	6	..
39	Milk	38	1
7	Rum	7	...
12	Whiskey	11	1
114		99	15

Thus 13·15 per cent. of the samples taken were adulterated; but this figure includes 12 samples of beer, which, though containing traces only of arsenic, could not be returned as genuine.

Abatement of Nuisances.

During the past year, the three District Inspectors have had to devote much time and attention to the various outbreaks of Smallpox, hence there has been a reduction in the number of nuisances dealt with, as compared with the total for the previous year. For particulars see table .

W. WILKINSON,

Chief Sanitary Inspector.

BOROUGH SURVEYOR'S REPORT, 1904.

WATER USED DURING 1904.

	Gallons.
Sewer Flushing	5,023,875
Street Watering	13,843,600
Steam Rolling	1,219,050
Cabstands, Bridges, and Wood Paving	354,600
Total ...	20,441,125

Disinfectant Powder used ... 4 Tons.
 Disinfectant Fluid used ... 960 Gallons.

NEW SEWERS LAID DURING 1904.

Abingdon Street 9"	Gresham Street 9"
Barlow Street 12" Extension	Grosvenor Road 9" and 12"
Chetwynd Street 9" ,,	Handel Street 9"
Davenport Road 9"	Pybus Street 9"

MANHOLES CONSTRUCTED DURING 1904.

Abbey Street 1	London Road 4
Abingdon Street 1	Normanton Road 1
Bateman Street 2	Osmaston Road 3
Barrow Street 1	Pybus Street 3
Becher Street 2	Roe Street 2
Borough's Walk 2	Richmond Road 2
Commerce Street 2	Selbourne Street 1
Cotton Lane 1	Watson Street 1
Devonshire Street 2	Yates Street 2
Grosvenor Road 7	Babington Lane 2
Handel Street 3	St. Peter's Street 1
Leonard St. Passage 1	
Liversage Place 1	Total ... 48

SEWERS CLEANED OUT DURING 1904.

	Loads.		Loads.
Abbey Street ...	1	Selbourne Street ...	1
Bright Street ...	1	Slack Lane ...	1
Brighton Road ...	14	Stanley Street ...	2
City Road ...	4	Stockbrook Road ...	1
Eton Street ...	2	Surrey Street ...	1
Harrow Street ...	3	Vale Street ...	3
Holcombe Street ...	3	Victoria Street ...	1
Kedleston Road ...	8	Walker Lane ...	1
London Road ...	80	Warwick Street ...	2
Lower Dale Road ...	1	Watson Street ...	2
Newland Street ...	4	Whitaker Road ...	1
Nottingham Road ...	3	Yates Street ...	10
Roe Street ...	4		—
St. Chad's Road ...	2	Total	156

MANHOLES CLEANED OUT DURING 1904.

	Loads.		Loads.
Borough's Walk ...	4	Nottingham Road ...	3
Boyer Street ...	2	Old Chester Road ...	2
Duffield Road ...	1	Osmaston Road ...	2
Lock-up Yard ...	1	Pear Tree Road ...	3
London Road ...	21	Slack Lane ...	2
Normanton Road ...	2		—
		Total	43

River Derwent Dredging ... 58 Loads.

Markeaton Brook Cleaning... 2 Loads.

JOHN WARD,

Borough Surveyor.

Appendix 1.

COUNTY BOROUGH OF DERBY.

Vital Statistics of Whole District during 1904 and previous years.

YEAR.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions.	Deaths of Non-residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond Dist.	Nett Deaths at all ages belonging to the Dist.	
		Number.	Rate.*	Under One Year of Age.		At all Ages.					Number.	*Rate.
				Number.	Rate per 1,000 Births Registered.	Number.	*Rate.					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1894.	97,781	2,890	29·6	351	121	1,490	15·3	189	22	No record.	1,468	15·1
1895.	98,927	2,900	29·4	459	158	1,698	17·2	216	29		1,669	16·9
1896.	100,087	2,834	28·4	426	150	1,620	16·2	234	43		1,577	15·8
1897.	101,262	2,803	27·7	470	168	1,720	17·0	286	64		1,656	16·4
1898.	102,448	2,860	28·0	484	169	1,830	17·9	197	74		1,756	17·2
1899.	103,649	2,984	28·8	488	163	1,856	18·0	310	81		1,775	17·2
1900.	104,684	2,900	27·7	504	173	1,932	18·5	342	78		1,854	17·7
1901.	106,076	2,939	27·8	455	155	1,673	15·8	304	75		1,598	15·1
1902.	116,869	3,326	28·5	417	126	1,698	14·6	290	59		1,639	14·1
1903.	118,707	3,215	27·1	411	128	1,671	14·1	309	75		1,596	13·5
Averages for years 1894-1903.	105,049	2,965	28·3	447	151	1,719	16·4	268	60		1,659	15·8
1904.	120,449	3,282	27·25	467	143	1,905	15·82	346	81		1,824	15·1 ₅

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “ Non-residents ” is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term “ Residents ” is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

Area of District in acres (exclusive of area covered by water) 5,272 acres.

Total population at all ages	114,848	At Census of 1901.
Number of inhabited houses	...	...	...	...	...	...	...	24,851
Average number of persons per house	...	...	...	...	...	...	...	4·7

Appendix II.

Vital Statistics of separate Localities in 1904 and previous years.

[illegible]

Note re-arrangement of Ward Boundaries for 1902. It is impossible to group the old arrangement so as to render them statistically comparable with the new arrangement.

